

THE ERA FORMULARY.

5000 FORMULAS FOR DRUGGISTS.

A COLLECTION OF ORIGINAL AND PRIZE FORMULAS, TO WHICH HAS BEEN ADDED A SELECTION OF FORMULAS FROM STANDARD AUTHORITIES IN THE ENGLISH, FRENCH AND GERMAN, FOR APPLICATION IN PHARMACY, IN THE HOUSEHOLD AND THE INDUSTRIES; MAKING A COMPLETE AND VALUABLE REFERENCE WORK FOR ALL BRANCHES OF THE PHARMACIST'S VOCATION.

CONTENTS CLASSIFIED UNDER NINE DIVISIONS:

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| I. PHARMACEUTICAL PREPARATIONS. | V. FAMILY MEDICINES. |
| II. PROPRIETARY PREPARATIONS. | VI. HOUSEHOLD FORMULAS. |
| III. TOILET ARTICLES. | VII. TECHNICAL RECIPES AND PROCESSES |
| IV. VETERINARY REMEDIES. | VIII. PAINTS, VARNISHES, ETC. |
| IX. MISCELLANEOUS. | |

WITH COMPLETE AND COMPREHENSIVE INDEX.

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COMPILED AND EDITED BY
THE PHARMACEUTICAL ERA.

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To
THE PHARMACISTS OF AMERICA
whose needs have been carefully considered and kept
constantly in mind in its preparation, do
the Publishers cordially
DEDICATE
this collection of formulas.

PREFACE.

A good formula book is a necessity in every well regulated apothecary shop, and with the view of catering to this want, we offer this collection of formulas. There are any number of so-called druggists' formula books, but most of them are very incomplete, and largely filled with formulas of no practical use to the druggist. Many of the formulas herein are printed for the first time, many more are gathered from reliable sources, and in the whole collection we have tried to exercise the greatest of care to employ only such as are of tried utility.

In our work we have taken advantage of all available authoritative sources, including standard authorities in the French and German, as well as a great variety of English publications. We have intentionally omitted all formulas contained in the United States Pharmacopœia and the National Formulary, for we assume that every well equipped pharmacy is already supplied with these standard publications, and we preferred to take up our space with other formulas which the druggist would not be so likely to have in his possession.

Condensation in directions and size of type employed have been our rule. We believe a small, condensed, handy book is more acceptable than a large, unwieldy volume. With each formula we have tried to give sufficient working directions to guarantee success in its manipulation in the hands of any well trained pharmacist. Throughout the work we have confined ourselves to English expressions and terms, avoiding the use of apothecaries' symbols and Latin terms, for the sake of simplicity and clearness.

The seven prime divisions logically separate the contents of the book into those departments of professional, industrial, and household economies in which the pharmacist is expected to be well grounded. In the division devoted to unofficial pharmaceutical preparations, or general pharmaceutical preparations, for which working processes are not given in the Pharmacopœia or National Formulary, so far as possible they have been brought under the special headings of elixirs, syrups, ointments, etc., together with a more or less close alphabetical arrangement so far as is rendered possible by the nature of the formulas or the class. Included in this division are many formulas which are strictly original, never having been in print, and, as a rule, the formulas have received the sanction of pharmacists, and with care in the choice of material and manipulation, it is believed success will attend their preparation.

In the division devoted to toilet preparations, we give something over 1000 formulas, feeling that we are justified in taking up such a large portion of the book for this class of recipes. Our experience in catering to the wants of druggists, has taught us that they are especially interested in formulas for such preparations.

We have included the department devoted to proprietary preparations in response to a constant demand from druggists for this class of formulas. We assume no responsibility for the correctness of these formulas, or for their employment; we offer them as we have found them, and, in nearly every case, we give credit to the source of our information. From the very nature of these preparations their composition is more or less of a secret, and any published formulas of them can be only approximations of their real constitution. It will be noticed that, in many cases, several alleged formulas from different authorities are given for the same article, often showing great variations, and which must furnish widely different products.

The collection of veterinary formulas will, without doubt, prove acceptable, and the divisions devoted to family remedies and household recipes offer remedies for minor ailments and processes for domestic employment for which the pharmacist is continually besought. It has been our endeavor to keep the work free from any encroachment upon the physician's domain, though, for the treatment of such simple ailments as do not require the doctor's assistance, sufficient working directions are given to insure success in the employment of the remedies.

It is not necessary to enter a lengthy excuse for the publication of this book, nor to point out its salient points; we believe that it will speak for itself. It is offered to the retail pharmacists of America in full confidence that it will prove acceptable and valuable, providing the most complete collection of its kind heretofore offered for supplying their particular wants. A very comprehensive index will facilitate reference and the easy finding of formulas, in any line. In consulting this index one should look for the specific name of the preparation desired, and also under the generic or class heading, as it is frequently impossible to accurately index some preparations under but one head.

We are indebted to contemporary journals, of which are mentioned the *American Druggist*, *Western Druggist*, *Pharmaceutical Record*, *Druggists Circular*, *The Chemist and Druggist*, *British and Colonial Druggist*, and such works as the *Proceedings of the American Pharmaceutical Association*, the *European Pharmacopœias*, *Hager's Pharmaceutische Praxis*, the formula books of *Beasley*, *Cooley*, *Griffith*, *Nelson*, *Lloyd*, *Harrop*, *Askinson*, *Deite*, *Piesse*, and many others.

THE PUBLISHERS.

Detroit, October, 1893.

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PART I.

Unofficial Pharmaceutical Preparations.

ELIXIRS.

1. Elixir Simple.

The following formula is very simple, is quickly made, and can be used with iron salts:

Syrup	5 ounces.
Alcohol	4 ounces.
Cinnamon water	6 ounces.
Vanilla extract.....	1 ounce.

It is said to be very palatable and to require no filtering.

2. Elixir Simple.

Oil of bitter orange.....	30 minims.
Alcohol	6 fl. ounces.

Dissolve, and add distilled water, 7 fluid ounces, syrup, 7 fluid ounces. Mix. Filter through paper moistened with proof spirit, and well sprinkled with kaolin, returning the first portion of filtrate until it passes through clear.

3. Elixir Simple.

Oil of bitter orange, 30 minims; rectified spirit, 6 fluid ounces. Dissolve, and add distilled water, 7 fluid ounces, syrup, 7 fluid ounces. Mix. Filter through paper moistened with proof spirit and well sprinkled with kaolin, returning the first portion of filtrate until it passes through bright.

4. Elixir Simple.

Oil sweet orange	2 drams.
Oil Ceylon cinnamon	15 minims.
Oil anise	4 minims.
Oil coriander	2 minims.
Oil bitter almonds	2 minims.
Alcohol	2 pints.
Simple syrup	2 pints.
Water	4 pints.

Dissolve the oils in one pint of alcohol. Mix together the remainder of the alcohol, one pint each of water and simple syrup. Add slowly to the solution of oils, then the remainder of simple syrup and water mixed. Paper pulp or phosphate of calcium may be used to facilitate clear filtration.

5. Elixir Simple.

French orange peel	2 drams.
Star anise	½ dram.
Cardamom	1 scruple.
Simple syrup	6 fl. ounces.
Caramel	10 grains.

Reduce orange peel to a pulp, add aromatics in fine powder, displace with diluted alcohol to obtain 6 fluid ounces, add remaining ingredients, and then enough water to make one pint.

6. Elixir Simple.

Oil orange peel	3 fl. drams.
Oil caraway	8 drops.
Oil cassia	8 drops.
Alcohol	10 fl. ounces.
Tinct. cardamom comp...	6 fl. ounces.
Wine	12 fl. ounces.
Water	20 fl. ounces.
Orange flower water	2 fl. ounces.
Syrup	20 fl. ounces.

Dissolve the oils in the alcohol, add the tincture and wine, then the water. If it does not filter clear, use some filter paper made into pulp with a portion of the liquid. When it filters clear, add the orange flower water and syrup.

7. Elixir Simple.

Spirit of orange.....	½ fl. ounce.
Alcohol	4 fl. ounces.
Cinnamon water	6 fl. ounces.
Syrup	6 fl. ounces.

Mix. This is a turbid mixture. For many purposes it is not necessary to filter before using, but generally it should be clear, particularly when used for physicians' prescriptions, and in making some elixirs. It can be made perfectly clear and limpid by agitating with paper pulp and filtering.

8. Elixir Valerianate Ammonia.

Valerianate of ammonia.	128 grains.
Elixir curacao	12 fl. ounces.
Simple syrup	2 fl. ounces.
Tincture cardamom comp.....	2 fl. ounces.

9. Elixir Antipyrine.

Antipyrine 3 drams.
 Alcohol $\frac{1}{2}$ fl. ounce.
 Syrup of raspberries ... $2\frac{1}{4}$ fl. ounces.
 Distilled water,
 sufficient for 6 fl. ounces.

10. Elixir Antiscorbutic.

Cinchona 3 ounces
 Gualacum 5 ounces.
 Pellitory 3 ounces.
 Orange peel 2 drams.
 Cloves 5 drams.
 Saffron $\frac{1}{2}$ dram.
 Benzoin 2 drams.
 Spirit of wine
 or brandy 32 ounces.
 Digest and filter.

11. Elixir Blackberry.

Fluid extract of
 blackberry $4\frac{1}{2}$ ounces.
 Syrup of
 blackberry fruit 15 fl. ounces.
 Jamaica spirit 12 fl. ounces.
 Curacao cordial..... 4 fl. ounces.
 Cinnamon water 4 fl. ounces.
 Syrup of orange peel.. 3 fl. ounces.
 Oil of cloves 12 drops.
 Oil of allspice 12 drops.

Mix the essential oils with the fluid extract of blackberry, add the Jamaica rum, and afterwards the other ingredients.

12. Elixir Blackberry Root.

Fluid extract
 blackberry 5 fl. ounces.
 Tincture
 orange peel 2 fl. ounces.
 Oil orange 15 minims.
 Oil cassia 8 minims.
 Oil anise 8 minims.
 Oil coriander 8 minims.
 Oil nutmeg 4 minims.
 Oil rose 4 minims.
 Extract vanilla .. 2 fl. ounces.
 Phosphate lime ... q. s.
 Syrup 3 pints, 4 fl. ounces.
 Alcohol 1 pint, 12 fl. ounces.
 Water q. s.
 to make 1 gallon.

13. Elixir Blackberry Root, Aromatic.

Fluid extract
 blackberry root 2 ounces.
 Oil cloves 10 minims.
 Oil cassia 10 minims.
 Simple elixir 14 ounces.

Add the oils to the elixir, then add the fluid extract.

14. Elixir Buchu.

Fluid extract of buchu... 4 fl. ounces.
 Talcum $\frac{1}{2}$ ounce.
 Elixir taraxacum com-
 pound, to make 1 pint.
 Triturate the fluid extract of buchu with talcum and gradually add 12 fluid ounces of the elixir, and filter, then add enough elixir to measure 1 pint. Each fluid dram represents 15 grains of buchu.

15. Elixir Buchu Compound.

Fluid extract buchu 2 fl. ounces.
 Fluid extract
 pareira brava 1 fl. ounce.
 Fluid extract uva ursi .. 1 fl. ounce.
 Talcum $\frac{1}{2}$ ounce.
 Elixir taraxacum com-
 pound, to make 1 pint.
 Triturate the fluid extract of buchu with the talcum, add 12 ounces of elixir, mixing thoroughly, filter and add the other fluid extracts and enough elixir to measure 1 pint. Each fluid dram represents $7\frac{1}{2}$ grains buchu and $3\frac{3}{4}$ grains each of pareira and uva ursi.

16. Elixir Buchu, Uva Ursi & Potassium Acetate Compound.

Fluid extract buchu... 16 fl. drams.
 Fluid extract uva ursi. 10 $\frac{3}{4}$ drams.
 Fluid extract juniper
 berries 5 $\frac{1}{4}$ drams.
 Alcohol 1 dram.
 Syrup 1 dram.
 Purified talcum.....120 grains.
 Adjuvant elixir, N. F.,
 enough to make..... 16 fl. ounces.

Mix the fluid extracts with the alcohol, then add 8 fluid ounces of adjuvant elixir, and the syrup. Incorporate with it the purified talcum, and filter. Dissolve in the filtrate the potassium acetate, and finally pass enough adjuvant elixir through the filter to make 16 fluid ounces. Each fluid dram contains 15 minims of the combined fluid extracts and 5 grains of potassium acetate.

17. Elixir Buchu and Pareira Brava.

Fluid extract buchu..... $\frac{1}{2}$ ounce.
 Fluid extract pareira
 brava $\frac{1}{2}$ ounce.
 Elixir cinchona, enough
 to make 16 ounces.

18. Elixir Caffeeae.

Caffeine 128 grains.
 Solution of hydrobromic
 acid (10 per cent)..... 2 oz. 6 dr.
 Compound elixir of taraxa-
 cum to make..... 1 pint.

Triturate the caffeine with 8 ounces of the

elixir, and add the acid; when dissolved add enough elixir to make the whole measure 1 pint. Each fluid dram contains 1 grain of caffeine.

19. Elixir Bark Ferrated.

Sulphate of quinia.....	2 scruples.
Sulphate of cinchonidia...	1 scruple.
Oil of anise.....	3 drops.
Oil of caraway.....	3 drops.
Oil of cinnamon.....	2 drops.
Alcohol	18 ounces.
Curacao	6 ounces.
Sugar	6 ounces.
Water	20 ounces.
Rose water	1 pint.
Citrate of iron and ammonia	512 grains.

Dissolve the alkaloids in the alcohol, rub the oils with the sugar, and dissolve with part of the water; dissolve the citrate of iron in the water, and mix; lastly, add the curacao.

20. Elixir Calisaya.

Tinct. cardamom comp.	6 fl. ounces.
Tinct. cinchona comp..	4 fl. ounces.
Tinct. gentian comp....	2 fl. ounces.
Syrup	16 fl. ounces.
Alcohol	16 fl. ounces.
Water	20 fl. ounces.

This answers well for the soda fountain.

21. Elixir Calisaya.

Sulphate quinine	20 grains.
Rose water	48 fl. ounces.
Alcohol	12 fl. ounces.
Water	20 fl. ounces.
Syrup	16 fl. ounces.

Cochineal tincture to color.

22. Elixir Calisaya.

Citric acid.....	20 grains.
Sulphate quinine.....	60 grains.
Sulphate cinchonidine.....	90 grains.
Solution ammonia, a sufficiency.	
Simple elixir, to make 1 gallon.	

Rub the alkaloids with $\frac{1}{2}$ pint elixir, and the acid with a similar quantity; then mix. Add the remainder of the elixir and set aside in a warm place until clear; then just neutralize with ammonia, care being taken not to render it alkaline. Finally filter

23. Elixir Calisaya Bark Detannated.

Calisaya bark.....	24 troy ounces.
Curacao orange peel..	16 troy ounces.
Coriander	4 troy ounces.
Cardamom	1 $\frac{1}{2}$ troy ounces.
Ceylon cinnamon.....	3 troy ounces.
Anise	1 troy ounce.
Cocoa (Baker's).....	8 troy ounces.

Reduce to a moderately fine powder; displace with a mixture consisting of one part,

by measure, of alcohol, and three parts of water, until two and a half gallons of percolate are obtained.

Meanwhile, prepare hydrated sesquioxide of iron, from six pints of solution of tersulphate of iron, measure it, and add to every four measures one measure of alcohol; then add of this sufficient to the percolate obtained as above, to deprive it of cincho-tannic acid. The absence of the latter is readily ascertained by the addition of a drop of tincture of chloride of iron to a filtered portion of the liquid in operation, which should not be colored by such addition. Should coloring result, the intensity or faintness will serve as a guide to the further quantity of hydrated sesquioxide of iron necessary to completely detannate the preparation. As soon as this result is obtained, strain the mixture upon a muslin strainer, and when the liquid ceases to pass, wash the residue upon the strainer, with sufficient of a mixture of 1 measure of alcohol to 3 of water, to make the strained liquid measure 5 gallons. Now triturate together, oil of orange $\frac{1}{2}$ fluid ounce and carbonate of magnesium 4 troy ounces. When thoroughly mixed, incorporate it with the strained liquid obtained as above, agitate well, and filter through paper; express the filter between muslin, filter the expressed liquid, and mix with the previous filtrate, in which dissolve 15 pounds of sugar. If necessary, filter, but simple straining will usually answer.

24. Elixir Calisaya Detannated.

Take the best quality of calisaya bark, in fine powder, 35 ounces avoirdupois, well-burned quick lime, 1 $\frac{1}{2}$ pounds. Slack the lime in least quantity of water, and mix intimately with the powdered bark, moisten the mixture with strong alcohol, and pack in a glass percolator. Pour on alcohol and percolate, returning the first portions of the menstruum to the percolator until it comes through colorless, or until it does not darken on addition of solution ferric chloride, showing the absence of tannin. Then proceed with the percolation, using strong alcohol, until 6 pints of the detannated tincture are obtained.

Make 1 gallon of syrup, using 2 pounds of sugar to 1 pint of water.

Prepare as follows:

Oil of sweet orange.....	1 ounce.
Oil of caraway seed.....	$\frac{1}{2}$ ounce.
Oil of cassia.....	$\frac{1}{2}$ ounce.
Oil of anise.....	2 drams.
Alcohol	4 ounces.

Dissolve the oils in the alcohol.

Take 3 ounces of this mixture and rub

well in a mortar with magneslum carbonate and a pint of 25 per cent. alcohol, and filter. Add 20 grains of citric acid to the syrup to prevent precipitation of the alkaloids, and mix with the detannated tincture, adding 9 pints of water. After thoroughly agitating add the portion of the flavoring mixture previously made soluble. Filter the whole. If not clear and bright, thoroughly shake a portion with paper pulp and refilter.

This formula in quantities given, makes 3 gallons of the finished product, each fluid dram representing 5 grains of the bark, and about 25 per cent. alcohol, miscible with any of the iron preparations.

25. Elixir of Calisaya and Coffee, Deslaurier's.

Yellow cinchona bark $2\frac{1}{2}$ troy ounces.
Brown cinchona bark 1 troy ounce.
Browned (slightly)
coffee 2 troy ounces.
Sugar $12\frac{1}{2}$ troy ounces.
Sherry wine..... 32 fl. ounces.
Citric acid.....150 grains.

Reduce the drugs to a coarse powder and mix all the above named ingredients. Allow the mixture to macerate for a few days in a warm location, then bring it to a boil, cool, and filter it. Dissolve in the filtrate $10\frac{1}{2}$ ounces of sugar, and add 2 fluid ounces of alcohol.

26. Elixir Calisaya Iron Protoxide.

Solution protoxide iron.. $\frac{3}{4}$ ounce.
Simple syrup..... $2\frac{1}{2}$ ounces.
Elixir Calisaya..... $12\frac{1}{2}$ ounces.
Caramel, a sufficiency.
Distilled water, to make 1 pint.

Solution protoxide of iron is prepared as follows:

Sulphate iron..... 3 ounces.
Carbonate sodium..... 4 ounces.
Citric acid, a sufficiency.
Distilled water, a sufficiency.

Dissolve the iron and sodium salts separately in a half gallon of water, and then pour the iron solution into the sodium. Collect the precipitate on a calico filter, and dissolve it in half a pint of water by the aid of the citric acid. Finally, make the solution to 1 pint.

27. Elixir Calisaya, Iron and Lactophosphate of Calcium.

Solution of
lactophosphate of iron.... 2 drams.
Solution lactophosphate
of lime..... 4 drams.
Muriatic acid, sufficient
(about 1 dram.)

Elixir cinchona

(from alkaloids)..... 8 ounces.
Simple elixir..... 7 ounces.
Essence bitter almonds.... $\frac{1}{2}$ dram.
Carmine, sufficient to color.

Mix and filter. If the preparation does not remain clear, add a few drops of muriatic acid. The solution of phosphate of iron is made as follows:

Sulphate of iron..... 4 ounces.
Warm water..... 8 ounces.
Sugar 4 ounces.
Solution phosphoric acid.. 4 ounces.

Dissolve the sulphate of iron in the warm water, add the solution of phosphoric acid and sugar, and filter. Solution of phosphoric acid is made as follows:

Glacial phosphoric acid.... 8 ounces.
Warm water..... 8 ounces.
Nitric acid.....320 grains.

Dissolve the phosphoric acid in water by allowing it to stand a few hours, stirring occasionally; add the nitric acid, and heat until no smell of it remains, and make up to 1 pint with water.

28. Elixir Calisaya, Iron and Lactophosphate of Calcium.

Lactate calcium..... 64 grains.
Phosphoric acid, 50 per
cent..... 64 minims.
Water ammonia..... $\frac{1}{2}$ fl. ounce.
Citric acid..... 120 grains.
Fluid extract wild
cherry, detannated..... 2 drams.
Oil bitter almonds..... 4 minims.
Oil peppermint..... 8 minims.

Elixir cinchona and iron
(N. F.), enough to make 16 fl. ounces.
Coloring tincture, enough.

Dissolve the lactate calcium in 7 ounces of elixir cinchona and iron with the aid of phosphoric acid. Then add the citric acid, and, when this is dissolved, the water of ammonia. Finally, add the other ingredients and enough elixir of cinchona and iron to make 16 fl. ounces.

29. Elixir Calisaya, Iron and Lactophosphate of Calcium.

Detannated tincture
cinchona $2\frac{1}{2}$ fl. ounces.
Aromatic spirit..... 2 fl. ounces.
Syrup lactophosphate
of lime..... 4 fl. ounces.
Syrup lactophosphate
iron 2 fl. ounces.
Water, enough to make 16 fl. ounces.

30. Elixir Calisaya Alkaloids.

Simple elixir..... 2 fl. ounces.
Quinine (alkaloid)..... 12 grains.
Cinchonine (alkaloid).... 6 grains.

Mix the alkaloids, and triturate them in

a mortar with 1 fluid ounce of simple elixir, and then gradually add acetic acid sufficient to effect their solution; then add the remainder of the simple elixir. Each fluid dram (teaspoonful) of the finished elixir, contains alkaloids sufficient to represent 4 grains of official calisaya bark.

31. Elixir Camphor Monobromated Compound.

Dissolve butyl-chloral 3 grains in spirit cinnamon, $1\frac{1}{2}$ drams; mix the solution with tincture of gelsemium 10 minims, red elixir $1\frac{1}{2}$ drams, and sufficient syrup to make $\frac{1}{2}$ ounce, and dissolve therein 2 grains of monobromated camphor.

32. Elixir Cascara Sagrada.

Extract rhamnus
purshiana 4 ounces.
Simple elixir..... 28 ounces.
Potassium carbonate..... 2 drams.
Mix and filter.

33. Elixir Cascara Sagrada.

Tincture of fresh orange
peel 2 fl. ounces.
Rectified spirit..... 1 fl. ounce.
Cinnamon water..... 3 fl. ounces.
Syrup 6 fl. ounces.
Liquid extract cascara
sagrada 8 fl. ounces.

34. Elixir Cascara Sagrada, Aromatic.

Fluid extract cascara.. 4 fl. ounces.
Syrup wild cherry..... 2 fl. ounces.
Syrup 6 fl. ounces.
Oil cloves, cassia, each. 6 minims.
Oil lemon, orange, each 20 minims.
Oil nutmeg..... 4 minims.
Oil fennel..... 12 minims.
Alcohol $2\frac{1}{2}$ fl. ounces.
Fuller's earth..... $\frac{1}{2}$ ounce.
Water 2 fl. ounces.
Mix and filter, pouring water through the filter to make 1 pint.

35. Elixir Cathartic Compound.

Resin of podophyllum.. 8 grains.
Resin of leptandra..... 16 grains.
Alcohol $\frac{1}{2}$ ounce.
Fluid extract senna..... 2 ounces.
Tartrate potassium and
sodium 2 av. ounces.
Bicarbonate sodium..... 120 grains.
Syrup 2 ounces.
Compound elixir taraxa-
cum 4 ounces.
Elixir glycyrrhiza to
make 16 ounces.
Dissolve the resins in the alcohol and add the solution to the other liquids previously mixed and in which the salts have

been dissolved. The product should not be filtered but should be shaken up before any portion of it is used.

36. Elixir Cathartic Compound.

Powdered Peruvian bark 2 ounces.
Butternut (the inner
bark of the root, dried
and bruised) 2 ounces.
Senna 2 ounces.
Dried peppermint 1 ounce.
Fennel seed (bruised).... 1 ounce.
Black cherry bark, pow-
dered 1 ounce.
Poplar bark, powdered.. 1 ounce.
Pure alcohol, 95 per cent 1 quart.
Distilled water $1\frac{1}{2}$ quarts.
Simple syrup $1\frac{1}{2}$ pints.
Digest for 14 days and strain.

37. Elixir Cathartic Compound.

Fluid extract senna..... 2 ounces.
Fluid extract licorice.... 1 ounce.
Epsom salts 2 ounces.
Fluid extract ginger..... 48 minims.
Fluid extract coriander.. 80 minims.
Fluid extract jalap..... 160 minims.
Scammony in fine pow-
der 160 grains.
Elixir, enough to make... 1 pint.

38. Elixir Laxative.

Fluid extract rhu-
barb 4 fl. ounces.
Fluid extract senna,
deodorized 2 fl. ozs. 320 min.
Fluid extract dande-
lion 4 fl. ounces.
Fluid extract buck-
thorn bark 2 fl. ounces.
Fluid extract ginger. 2 fl. drams.
Glycerine 1 pint.
Phosphate of soda... 5 ozs. 160 grs.
Rochelle salts 4 ounces.
Bicarbonate soda ... 2 ozs. 160 grs.
Tincture lemon peel. $3\frac{1}{2}$ fl. ounces.
Syrup $28\frac{1}{2}$ fl. ounces.
Alcohol $19\frac{1}{2}$ fl. ounces.
Tincture orange peel $3\frac{1}{2}$ fl. ounces.
Water, quantity suf-
ficient to make ... 8 pints.

39. Elixir Laxative.

Fluid extract rhubarb.... $\frac{1}{2}$ fl. ounce.
Fluid extract senna..... $\frac{1}{2}$ fl. ounce.
Fluid extract taraxacum $\frac{1}{2}$ fl. ounce.
Fluid extract buckthorn
bark $\frac{1}{4}$ fl. ounce.
Fluid extract ginger..... $\frac{1}{4}$ fl. ounce.
Rochelle salts 1 troy ounce.
Simple elixir 14 fl. ounces.
Carbonate of magnesium, a suffi-
cient quantity.
Triturate the fluid extracts (having pre-

viously mixed them together) in a capacious mortar, with carbonate of magnesium sufficient to form a creamy mixture; then gradually add the simple elixir, stirring well, and filter. Lastly dissolve in the filtrate the Rochelle salt.

40. Elixir Laxative.

Fluid extract senna..... 2 ounces.
Fluid extract butternut
bark 1 ounce.
Fluid extract mandrake...½ ounce.
Rochelle salts 2 ounces.
Bicarbonate of sodium.... 1 dram.
Elixir enough to make.... 1 pint.

41. Elixir Laxative Compound.

Fluid extract of rhamnus purshiana..... 2 fl. ounces.
Fluid extract of juglans 1 fl. ounce.
Fluid extract of glycyrrhiza ½ fl. ounce.
Compound tincture of cardamom ½ fl. ounce.
Senna, in coarse powder 560 grains.
Aromatic spirit..... 2 fl. ounces.
Alcohol 1 fl. ounce.
Sugar 7 tr. ounces.
Water, enough to make.. 16 fl. ounces.

Exhaust the senna with boiling water, so as to obtain 5 fluid ounces of infusion. Allow this to cool, add 1 fluid ounce of alcohol, let it stand for a while, then pour off the clear liquid and in the latter dissolve the sugar. With this syrup, mix the aromatic spirit and the compound tincture of cardamom, then add the fluid extracts, and finally enough water to make 16 fluid ounces.

42. Elixir Cherries.

Ripe sour cherries free from stems..... 8 av. ounces.
Alcohol 2 fl. ounces.
Glycerine 1 fl. ounce.
Simple syrup enough to make..... 1 pint.

Crush the cherries and stones to a fine pulp, add the alcohol and glycerine and macerate for 8 days, press and filter and add to the filtrate enough syrup to make the whole measure 1 pint.

43. Elixir Chloral.

Chloral hydrate 960 grains.
Simple elixir, quantity sufficient to make..... 16 ounces.

44. Elixir Chloroform Compound.

Muriate of morphia..... ½ grain.
Hydrate of chloral..... ½ dram.
Chloroform ½ fl. dram.

Tincture of Cannabis In-

dica 20 minims.
Tincture of capsicum.... 20 minims.
Dilute hydrocyanic acid.. 20 minims.
Essence of peppermint... 10 minims.
Compound syrup of sarsaparilla 1 fl. dram.

45. Elixir Cinchona

For syrup or tonic.

Oil cinnamon, true..... 2 drams
Oil cloves..... 2 drams.
Oil nutmeg..... 80 drops.
Tincture tolu..... 12 drams.
Tincture ginger..... 12 ounces.
Fluid extract cinchona, pale 16 ounces.
Carbonate magnesium..... 2 ounces.
Water, quantity sufficient to make..... 4 pints.

Triturate oils, tinctures and fluid extract with the carbonate magnesium, gradually add water, filter, and pass water through the filter to make 4 pints.

46. Elixir Cinchona.

Cinchona bark 600.
Fresh orange peel..... 350.
Fresh curacao peel..... 150.
Gentian 180.
Cinnamon 100.
Cloves 1.
Cardamom 0.8
Macerate with white wine..... 2250.
Alcohol (96 per cent.)..... 3500.

Dissolve rock candy 3100. in water 1500. with heat, cool, mix with the vinous liquid, allow to stand two days, and filter.

47. Elixir Cinchona and Gentian With Malate of Iron.

Malate of iron, in scales 128 grains.
Extract of gentian..... 40 grains.
Syrup 4 fl. ounces.
Elixir of cinchona..... 6 fl. ounces.
Tincture of vanilla..... 2 fl. drams.
Oil of cinnamon..... ½ minim.
Hot water..... 1 fl. ounce.
Aromatic elixir enough to make..... 16 fl. ounces.

Dissolve the malate of iron and gentian in the hot water; then mix with the other ingredients.

48. Elixir Chinoidine Acetate.

Chinoidine 256 grains.
Distilled water 4 fl. ounces.
Acetic acid, simple elixir, of each, a sufficient quantity.

Powder the chinoidine and dissolve in the distilled water by sufficient acetic acid, then add simple elixir until sixteen fluid ounces are produced, and filter. Each fluid dram (teaspoonful) of the finished elixir contains two grains of chinoidine.

49. Elixir of Chinoidine Compound.

Elixir of acetate of chinoidine (No. 48)..... 8 fl. ounces.
 Elixir of dandelion (No. 53) 8 fl. ounces.

Mix them together. Each fluid dram (teaspoonful) of the finished elixir contains one grain of chinoidine, and represents about four minims of fluid extract.

50. Elixir Coca.

Coca leaves 100 grams.
 Alcohol (60 per cent.)..... 640 grams.

Macerate for 10 days, express strongly, and mix the liquid with 400 grams of simple syrup. Filter.

51. Elixir Cocaine.

Muriate of cocaine 1 part.
 Hydrochloric acid 5 parts.
 Elixir de garus 500 parts.
 Distilled water 100 parts.

52. Elixir Curacao.

Bitter orange peel, fine ground 4 ounces.
 Powdered cloves 60 grains.
 Powdered canella 60 grains.
 Saturated tincture fresh orange peel 8 fl. ounces.
 Cologne spirits 5 pints.
 Orange flower water.... 12 fl. ounces.
 Sugar 4 pounds.

To the cologne spirits add the tincture of orange peel, then the water, and with the mixture percolate the powders. To the percolate add the orange flower and sugar; dissolve and strain.

53. Elixir Dandelion.

Fluid extract of dandelion.. 2 fl. ozs.
 Simple elixir 14 fl. ozs.
 Carbonate of magnesium, a sufficient quantity.

Triturate the fluid extract of dandelion with carbonate of magnesium sufficient to form a creamy mixture, then gradually add the simple elixir, stir well, and filter. Each fluid dram of the finished elixir represents seven and a half minims of fluid extract of dandelion.

54. Elixir of Dandelion Compound.

Fluid extract of dandelion 6 fl. ozs.
 Extract of gentian 1 fl. oz.
 Oil of sweet orange.... 100 drops.
 Oil of cinnamon 12 drops.
 Oil of anise 10 drops.
 Oil of caraway 5 drops.
 Oil of coriander 20 drops.
 Extract of licorice..... 1 oz.
 Syrup of wild cherry... 2½ pints.
 Alcohol 1½ pints.
 Water 4 pints.

Mix the oil with the alcohol, and the ex-

tracts with the syrup of wild cherry and water, and mix together and filter.

55. Elixir of Dandelion Compound.

Fluid extract dandelion. 1 fl. ounce.
 Fluid extract wild cherry bark ¾ fl. ounce.
 Fluid extract gentian... ⅛ fl. ounce.
 Fluid extract bitter orange peel ¼ fl. ounce.
 Fluid extract cinnamon ⅛ fl. ounce.
 Fluid extract licorice... ⅛ fl. ounce.
 Powdered anise 20 grains.
 Powdered caraway 20 grains.
 Powdered coriander 20 grains.
 Simple elixir 14 fl. ounces.
 Carbonate of magnesium, a sufficient quantity.

Triturate the mixed fluid extracts and powdered drugs with carbonate of magnesium sufficient to form a creamy mixture, then gradually add the simple elixir, stirring well, and cover the mixture, and permit it to macerate an hour, then filter it.

56. Elixir Gamboge Alkaline.

Gamboge 1.0.
 Solution potassium carbonate.... 6.0.
 Distilled water 3.0.

Macerate, agitating frequently. When solution is accomplished filter.

57. Elixir Gentian.

Fluid extract gentian..... 1 ounce.
 Simple elixir 15 ounces.

58. Elixir Geranium Compound.

Fluid extract geranium. 1½ fl. ounce.
 Fluid extract blackberry ¾ fl. ounce.
 Fluid extract cinnamon. 2 fl. drams.
 Fluid extract cloves.... 1 fl. dram.
 Fluid extract cardamoms 1 fl. dram.
 Fluid extract mace..... 1 fl. dram.
 Spirit orange (1 in 18)... 30 minims.
 Alcohol 2½ fl. ounces.
 Simple syrup..... 4 fl. ounces.
 Water, quantity sufficient 1 pint.

59. Elixir of Grindelia, Aromatic.

Grindelia 2 av. ounces.
 Cinnamon 1 dram.
 Cloves 1 dram.
 Anise ½ dram.
 Coriander ½ dram.
 Cardamom..... ½ dram.
 Bicarbonate of potassium 1 dram.
 Hot water..... 1 pint.
 Tincture of cudbear.... 3 fl. ounces.
 Elixir of orange, enough to make..... 1 pint.

Reduce the drugs to a coarse powder, add the boiling water in a porcelain or well tinned dish, and boil for half an hour, strain and evaporate to 4 fluid ounces;

when cold add the tincture of cudbear, and enough elixir of orange to make 1 pint. After a few days filter.

60. Elixir of Grindella, Aromatic.

Fluid extract of grinde-
lla 4 fl. ounces.
Tincture of asarum can-
adense $\frac{1}{2}$ fl. ounce.
Alcohol $2\frac{1}{2}$ fl. ounces.
Oil of cloves..... 6 minims.
Simple elixir..... 9 fl. ounces.

Dissolve the oil of cloves in the alcohol, add the fluid extract and tincture, and then the elixir. Mix and filter.

61. Elixir Guarana.

Guarana, No. 60 powder, 4 ounces; light magnesia, $\frac{1}{2}$ ounce; oil of cinnamon, 6 minims; syrup, 2 fluid ounces; proof spirit, a sufficient quantity. Mix intimately the powders, and moisten them with 3 fluid ounces of proof spirit. After 24 hours maceration, mix with 8 ounces of coarse sand, and pack in a percolator; pass through proof spirit until 16 ounces are obtained, then transfer the mass to a press bag and apply pressure. To the percolate add the syrup and oil of cinnamon, and make up to a pint by the addition of the expressed liquid, previously reduced by evaporation if necessary.

62. Elixir Guarana.

Fluid ex. guarana.... 21 fl. ozs., 160 mln.
Carbonate magnesia.. 3 fl. drams.
Curacao flavor..... 16 fl. ounces.
Tincture orange peel.. 7 fl. ounces.
Tincture lemon peel.. 1 fl. ounce.
Extract vanilla..... 2 fl. ounces.
Alcohol 7 fl. ounces.
Syrup 22 fl. ounces.
Glycerine..... 10 fl. ounces.
Water, quantity suffi-
cient to make..... 8 pints.

63. Elixir Helonias.

Fluid extract of helon-
ias, compound..... 2 fl. ounces.
Simple elixir..... 14 fl. ounces.
Alcohol $\frac{1}{2}$ fl. ounce.
Carbonate of magnesium, a sufficient
quantity.

Triturate the compound fluid extract of helonias with sufficient carbonate of magnesium to form a creamy mixture, then gradually add the simple elixir, and filter. Mix the alcohol with the filtrate.

Each fluid dram of the preparation will contain such proportion of $7\frac{1}{2}$ minims of compound fluid extract of helonias, as will dissolve in 1 fluid dram of the menstruum.

64. Elixir Hops.

Fluid extract hops.. 21 fl. ozs., 160 mln.
Tincture orange..... 6 fl. ounces.
Curacao flavor..... 6 fl. ounces.
Syrup 32 fl. ounces.
Alcohol 24 fl. ounces.
Phosphate lime q. s.
Glycerine..... 8 fl. ounces.
Water, quantity suf-
ficient to make.... 8 pints.

65. Elixir Chloride of Iron and Gentian.

Gentian root, powdered.... 1 ounce.
Fresh orange peel, grated. 4 drams.
Coriander seed..... 2 drams.
Alcohol 24 ounces.
Water 8 ounces.
Simple syrup..... 2 pints.
Tincture of ferric chloride. 2 ounces.
Citrate of potassium..... 2 drams.

Percolate the drugs with the mixture of alcohol and water until 2 pints are obtained. Dissolve the citrate of potassium in half an ounce of water, and add this to the tincture of iron. Now add this to the simple syrup, mix, and add the mixture to the percolate.

66. Elixir of Chloride of Iron With Ammonium Citrate and Gentian.

Fluid extract of gentian $\frac{1}{2}$ fl. ounce.
Solution of citrate of
ammonium 1 fl. ounce.
Tincture of chloride of
iron $\frac{1}{2}$ fl. ounce.
Simple elixir,
Carbonate of magnesium,
Distilled water, of each, a sufficient
quantity.

Triturate the fluid extract of gentian in a mortar, with sufficient carbonate of magnesium to form a thick paste, and then gradually add 4 fluid ounces of distilled water, and filter. Mix the tincture of chloride of iron with the solution of citrate of ammonium and add to the preceding filtrate, then add simple elixir sufficient to make the whole measure 16 fluid ounces.

Each fluid dram (teaspoonful) of the finished elixir contains about 2 minims each of tincture of chloride of iron and fluid extract of gentian.

67. Elixir Iron Citrate and Lactate.

Lactate of Iron..... $\frac{1}{2}$ fl. ounce.
Citrate of Iron..... 96 grains.
Water 7 fl. ounces.
Alcohol 5 fl. ounces.
Simple syrup..... 9 fl. ounces.
Essence of lemon..... 96 minims.
Essence of cloves..... 1 minim.

Mix the distilled water and syrup, and

dissolve in it the lactate of iron, then add and dissolve the citrate of iron; cool, and mix with this solution the simple syrup and the alcohol, having previously mixed the alcohol and essences together. Color the product with caramel, and filter.

68. Elixir Iron and Quinine.

Pyrophosphate iron.....256 grains.
Quinine sulphate..... 30 grains.
Glycerine 4 ounces.
Citric acid..... ½ dram.
Brandy 4 ounces.
Syrup, alcohol and wa-
ter, of each enough,
when mixed in equal
parts, to make..... 2 pints.

Dissolve the quinine and pyrophosphate in the water with the citric acid. Filter, then add the other ingredients.

69. Elixir Iron, Quinine and Strychnine Phosphate.

Quinine sulphate 128 grains.
Iron phosphate, scales.. 256 grains.
Strychnia 2 grains.
Alcohol 2 ounces.
Water 2 ounces.
Glycerine 2 ounces.
Elixir orange, q. s..... 16 ounces.
Solution soda q. s.

Dissolve the strychnine in the alcohol, add the quinine and glycerine, and dissolve the quinine by aid of heat, then add sufficient elixir orange to make 14 ounces. Dissolve the iron phosphate in 2 ounces water by aid of heat. Mix with the elixir and neutralize with sufficient liquor soda.

70. Elixir Iron, Quinine and Strychnine Phosphates.

Phosphate of iron 256 grains.
Quinine sulphate 128 grains.
Strychnine 1¼ grains.
Citric acid 15 grains.
Alcohol 5 fl. ounces.
Spirits orange comp. N.
F..... 100 minims.
Syrup 6 fl. ounces.
Water, sufficient to
make 1 pint.

Aqua ammonia q. s.

Triturate the quinine, strychnine and citric acid in a mortar; add the alcohol, compound spirits of orange, and the syrup, previously heated to about 65 deg. C. Dissolve the phosphate of iron in 4 fluid ounces of water, and add this to the solution first prepared; and after having mixed these solutions, add enough water to make 1 pint. Carefully neutralize with aqua ammonia, allow to stand for some time, and if convenient, filter.

71. Elixir Iron, Quinine and Strychnine Phosphate and Pyrophosphate.

Strychnia 1 grain.
Quinine sulphate..... 60 grains.
Acid citric 5 grains.
Ferri pyrophosphate.... ½ ounce.
Alcohol 3 ounces.
Spirit of orange 80 minims.
Syrup 6 ounces.
Water 7 ounces.

Triturate the quinine, strychnine and citric acid together until minutely divided, then add the alcohol and spirit of orange. Warm the syrup slightly, add it to the turbid mixture; when upon stirring it will become clear. Dissolve the pyrophosphate in the water, mix the solutions and carefully add water of ammonia, drop by drop, until the elixir is exactly neutral to litmus paper. Filter.

72. Elixir Iron, Quinine and Strychnine Phosphate and Pyrophosphate.

Strychnine (alkaloid) .. 1 grain.
Quinine sulphate 64 grains.
Acid citric 5 grains.
Alcohol 3 ounces.
Syrup 6 ounces.
Water 4 ounces.
Orange flower water ... 3 ounces.
Ferri phosphate or py-
rophosphate 256 grains.

Soda bicarb, a sufficient quantity.

Triturate together the alkaloids and the acid, until thoroughly mixed. Rub this with the alcohol gradually added. Heat the syrup to about 150 degrees F., add it to the alcoholic mixture and stir until clear.

Dissolve the iron salt in the water, using heat if necessary, and add the orange flower water. Mix the two solutions, and, when cold, add carefully bicarbonate of soda in small portions until the elixir is but slightly acid. Allow to stand a few hours and filter through white paper.

73. Elixir Iron Salicylate Com- pound.

Salicylate of iron 640 grains.
Hot water 2½ fl. ozs.
Glycerine 2½ fl. ozs.
Fluid extract of colchi-
cum 1½ fl. ozs.
Deodorized tincture of
opium 4½ fl. drams.
Elixir of orange, enough
to make 1 pint.

Dissolve the iron salt in the hot water and glycerine, and add the other ingredi- ents. Each fluid dram contains 5 grains

of salicylate of iron, $2\frac{1}{2}$ minims of deodorized tincture of opium, and represents 5 grains of colchicum.

74. Elixir Licorice.

Three hundred parts extract of licorice are dissolved in 900 fennel water, and 50 water of ammonia added; the mixture, in a well stoppered bottle, is agitated frequently during several days, and then a solution of 10 oil of anise in 240 alcohol added. After standing, the clear portion is decanted, the turbid residue filtered.

75. Elixir Licorice, Aromatic.

Fluid extract of licorice.... 2 fl. ozs.
 Fluid extract of sweet orange $\frac{1}{2}$ fl. oz.
 Fluid extract coriander.... $\frac{1}{4}$ fl. oz.
 Fluid extract of angelica seed $\frac{1}{4}$ fl. oz.
 Fluid extract of cinnamon. $\frac{1}{4}$ fl. oz.
 Fluid extract of cloves..... $\frac{1}{8}$ fl. oz.
 Simple elixir 13 fl. ozs.
 Alcohol $\frac{1}{2}$ fl. oz.
 Carbonate of magnesium, a sufficient quantity.

Triturate the fluid extracts with carbonate of magnesium sufficient to form a creamy mixture; then gradually add the simple elixir, stirring well, and filter.

Each fluid dram of the finished elixir represents $7\frac{1}{2}$ minims of fluid extract of licorice, together with aromatics.

76. Elixir Licorice, Aromatized.

Fluid extract of licorice root 4 fl. ounces.
 Oil of nutmeg 2 minims.
 Oil of anise 5 minims.
 Oil of coriander 6 minims.
 Oil of fennel 4 minims.
 Deodorized alcohol 8 fl. ounces.
 Distilled water 7 fl. ounces.
 Carbonate magnesia ... 120 grains.
 Syrup, simple 13 fl. ounces.

77. Elixir of Life, Bitter.

Aloes 1 troy ounce.
 Cinnamon 10 troy ounces.
 Calamus $2\frac{1}{2}$ troy ounces.
 Angelica root..... 5 troy ounces.
 Saffron 6 troy ounces.
 Caramel 10 troy ounces.
 Glycerine 215 troy ounces.
 Alcohol 180 fl. ounces.
 Water 350 fl. ounces.

Mix and reduce the drugs to a coarse powder and macerate in the mixed alcohol and water for 14 days, stirring the mixture thoroughly each day; then filter, and to the filtrate add the glycerine and caramel.

78. Elixir Logwood.

Extract of logwood..... 10 drs. 2 ser.
 Brandy 12 fl. ounces.
 Curacao 6 fl. ounces.

Syrup 6 fl. ounces.
 Oil of nutmeg..... 4 drops.
 Oil of cinnamon..... 4 drops.
 Warm water sufficient

to make..... 2 pints.

Dissolve the extract in the water, add the other ingredients, and when cool, filter.

79. Elixir Nux Vomica.

Tincture nux vomica.... 120 drops.
 Curacao cordial..... 3 fl. ounces.
 Syrup orange peel..... $2\frac{1}{2}$ fl. ounces.
 Aromatic tincture of angostura..... $\frac{1}{2}$ fl. ounce.

Mix. The last named tincture is found to disguise the disagreeable bitterness of the strychnia.

80. Elixir Pepsin.

Scale pepsin..... 1 ounce.
 Cinnamon water..... 2 ounces.
 Caraway water..... 4 ounces.
 Hydrochloric acid..... 1 dram.
 Compound tincture of china $\frac{1}{2}$ ounce.
 Glycerine 16 ounces.
 Distilled water to make.... 64 ounces.

81. Elixir Pepsin, Bismuth and Strychnine.

Ammonio-citrate bismuth. 128 grains.
 Sulphate of strychnine.... 2 grains.
 Pepsin 128 grains.
 Water 4 fl. ounces.
 Alcohol dilute..... 2 fl. ounces.
 Simple syrup..... 2 fl. ounces.
 Curacao elixir..... 4 fl. ounces.
 Tincture cardamom comp.. 4 fl. ounces.

82. Elixir Pinus Compound.

Fluid extract white pine bark 6 fl. drams.
 Fluid extract balm Gilead buds..... 5 fl. drams.
 Fluid extract spikenard 5 fl. drams.
 Fluid extract wild cherry $4\frac{1}{2}$ fl. drams.
 Fluid extract ipecac.... 40 minims.
 Sanguinaria nitrate.... 2 grains.
 Chloroform 64 minims.
 Morphine acetate..... 8 grains.
 Ammonium chloride.... 64 grains.
 Spirit of orange (1 in 8).. 30 minims.
 Spirit of coriander (1 in 8) 10 minims.
 Spirit of anise..... 10 minims.
 Alcohol 3 fl. ounces.
 Simple syrup..... 4 fl. ounces.
 Water to make..... 1 pint.

This elixir should be allowed to stand 4 or 5 days before filtering.

83. Elixir Phosphorus.

Dissolve 10 grains of phosphorus in 10 fluid drams of bromide of ethyl; add 8 fluid ounces of stronger alcohol and sufficient Elixir of Orange to make 1 gallon.

84. Elixir of Phosphorus, Quinia and Strychnia.

Is made from the above, $2\frac{1}{2}$ grains of strychnia and 64 grains of sulphate of quinia, by the aid of dilute sulphuric acid in 1 pint of the elixir.

85. Elixir Phosphorus Compound.

Solution of phosphorus. 75 minims.
 Strychnine $2\frac{1}{8}$ grains.
 Sulphate of quinine 64 grains.
 Solution of phosphate of iron, 50 per cent. 256 minims.
 Alcohol 2 fl. ounces.
 Tincture of cudbear. 2 fl. drams.
 Elixir of orange, enough to make. 1 pint.

Dissolve the quinine and strychnine in 8 fluid ounces of the elixir, and mix with the solution of phosphorus, alcohol and tincture of cudbear, previously mixed, then add the solution of phosphate of iron and enough elixir of orange to make 1 pint.

Each fluid dram contains 1-100 grain of phosphorus, 1-60 grain strychnine, $\frac{1}{2}$ grain of quinine, and 1 grain of phosphate of iron.

86. Elixir Quebracho.

Fluid extract quebracho 1 fl. ounce.
 Magnesium carbonate... 2 drams.
 Mix thoroughly, then add:
 Aromatic spirit (N. F.). 180 minims.
 Tincture of vanilla. 120 minims.
 Syrup 1 fl. ounce.
 Aromatic elixir, enough to make. 1 pint.

87. Quinelixir.

Elixir taraxacum compound 8 ounces.
 Syrup 7 ounces.
 Fluid extract yerba santa. 1 ounce.

Rub the yerba santa with 240 grains of carbonate magnesia, mix with the syrup and elixir and filter.

88. Elixir Rhubarb.

Fluid extract of rhubarb 2 fl. ounces.
 Simple elixir. 14 fl. ounces.
 Magnesium carbonate, a sufficient quantity.

Triturate the fluid extract in a capacious mortar with sufficient magnesium carbonate to form a creamy mixture; then gradually add the simple elixir, stirring well, and filter.

89. Elixir of Rhubarb and Fluid Magnesia, Aromatic.

Rhubarb, in coarse powder 3 ozs. and 90 grs.
 Sulphate of magnesium 2 ozs. and 96 grs.
 Sugar. 4 ounces.
 Spirit of peppermint U. S. P., Alcohol, of each quantity sufficient.

Moisten the rhubarb with dilute alcohol

and pack in a cylindrical percolator. Percolate with a menstruum of 1 part alcohol to 4 parts water, until 2 pints of tincture are obtained. To this, add the sulphate of magnesium, sugar and spirit of peppermint, let it stand in a moderately warm place for 24 hours, and filter.

90. Elixir Saccharin.

Elixir of chartreuse (compound spirit of melissa), 100 grams; alcohol of 50 per cent., 900 grams; saccharin, 3 grams; bicarbonate of sodium, 1.50 grams. The addition of soda renders the saccharin soluble.

91. Elixir Saccharin.

Saccharin 480 grains
 Bicarbonate of sodium. 240 grains.
 Alcohol $2\frac{1}{2}$ fl. ounces.
 Distilled water, quantity sufficient.

Rub the saccharin and bicarbonate of sodium in a mortar, with $\frac{1}{2}$ pint of distilled water gradually added. When dissolved add the spirit, filter, and wash the filter with sufficient distilled water to produce 1 pint of elixir. Each fluid dram contains 3 grains of saccharin.

92. Elixir Senna.

Alexandrian senna. 1 pound.
 Refined sugar, in coarse powder. 12 ounces.
 Rectified spirit,
 Distilled water, of each a sufficient quantity.

Mix 4 fluid ounces of rectified spirit with 12 fluid ounces of water, and with it moisten evenly the senna. Pack tightly in a closed vessel and macerate for 3 days. Express forcibly, and pour the product on the sugar. Break up the marc, and add to it sufficient of the same menstruum to furnish in all 16 fluid ounces of product. Express again after 24 hours' maceration, add the liquor to the previously obtained product and the sugar, heat in a closed vessel by means of a water bath to 200 degrees F., add after mixing:

Chloroform 24 minims.
 Oil of coriander. $2\frac{1}{2}$ minims.
 Tincture of capsicum... $\frac{1}{2}$ fl. drams.
 Rectified spirit. 3 fl. drams.

Agitate thoroughly and, if necessary, add proof spirit to make the product measure 24 fluid ounces.

93. Elixir of Sumbul, Compound.

Fluid extract of sumbul $2\frac{1}{2}$ fl. ounces.
 Fluid extract of scutellaria 1 fl. ounce.
 Fluid extract of valerian 2 fl. drams.
 Talcum 4 drams.
 Adjuvant elixir, enough to make. 1 pint.

Rub the fluid extract of sumbul with the

talcum, add 12 ounces of the elixir and filter; to the filtrate add enough of the elixir to make the whole measure 1 pint.

94. Elixir Terpene.

Terpene	1 part.
Glycerine	14 parts.
Alcohol	14 parts.
Strained honey.....	14 parts.
Vanillin004 part.

95. Elixir Terpene.

Terpin, 50 centigrams; alcohol 95 per cent., 2 grams; glycerine of 30 degrees B., 4 grams. This keeps indefinitely, its amount of alcohol is small, and its doses divide nicely into teaspoonfuls. An elixir containing 50 centigrams of terpin to the tablespoonful may be made as follows: Terpin, 50 centigrams; glycerine, 7 grams; alcohol, 95 per cent., 7 grams; honey, 7 grams; vanillin, 2 milligrams. Honey is preferable to simple syrup, because it does not form crystals, and the vanillin gives the preparation an agreeable flavor.

96. Elixir Thuja Occidentalis.

Thuja occidentalis.....	12 ounces.
Alcohol,	
Glycerine, of each a sufficient quantity.	

Percolate to 12 fluid ounces, with a mixture of equal parts of alcohol and glycerine, and set aside; continue the percolation to 12 fluid ounces more, evaporate to 6 fluid ounces, mix with the first portion, and this mixture with 18 fluid ounces of simple elixir.

97. Elixir Viburnum Compound.

Black haw bark.....	12 ounces.
High cranberry bark.....	8 ounces.
Blue cohosh.....	3 ounces.
Life root plant.....	3 ounces.
Sugar	4 ounces.
Alcohol	32 ounces.
Water, sufficient to make.	1 gallon.

Make a tincture of the drugs by percolating first with the alcohol mixed with an equal quantity of water, then with water until 1 gallon is obtained. In this dissolve the sugar and filter.

98. Elixir Viburnum Compound.

Scul cap.....	4 drams.
Cinnamon	4 drams.
High cranberry.....	1 ounce.
Wild yam.....	1 ounce.
Cloves	1 ounce.
Alcohol, 76 per cent., enough to make.....	32 ounces.

99. Elixir Yerba Santa.

Yerba santa.....	3 ounces.
Sweet orange peel.....	1 ounce.
Cardamom	1½ drams.
Cloves	1½ drams.
Cinnamon	1½ drams.
Anise	1 dram.
Coriander	1 dram.
Caraway	1 dram.
Red saunders.....	½ dram.
Sugar (granulated).....	1½ pounds.
Alcohol	6 fl. ounces.
Glycerine	6 fl. ounces.

Reduce to No. 40 powder. Macerate for 24 hours and percolate with a mixture of alcohol, glycerine and water until 2½ pints have passed through. Filter this solution and percolate it through the sugar.

100. Aletris Cordial.

Fluid extract aletris.....	4 ounces.
Alcohol	3 ounces.
Water	3 ounces.
Sherry wine.....	10 ounces.

101. Aletris Cordial.

Aletris farinosa.....	1 ounce.
Caulophyllum thalictroides	1 ounce.
Viburnum opulus.....	1 ounce.
Helonias dioica.....	1 ounce.
Syrup	2 fl. ounces.
Alcohol	2 fl. ounces.
Sherry wine, quantity sufficient to make.....	16 fl. ounces.

Extract the drugs with 16 fluid ounces wine to which the alcohol has been added, and obtain 14 fluid ounces of liquid. Mix this with the syrup and filter if necessary.

102. Casearia Cordial.

Cascara sagrada.....	16 ounces av.
Licorice root.....	6 ounces av.
Sweet flag root.....	2 ounces av.
Cardamom seed.....	1 ounce av.
Angelica root.....	1 ounce av.
Bicarbonate of sodium.	½ ounce av.
Diluted alcohol.....	6 pints.
Sugar	2 pounds.
Water, enough to make	1 gallon.

103. Lime Juice Cordial.

Glucose	36 pounds.
Cane sugar.....	108 pounds.
Water	28 gallons.
Lime juice.....	17 gallons.
Oil of orange.....	4 drams.
Oil of nutmegs.....	4 drams.
Salicylic acid.	2 grains.

Dissolve the glucose and cane sugar in the water, add to the solution the lime juice, the essential oils and the salicylic acid. Mix well and strain.

SYRUPS.

104. Syrup Acid Carbolic.

Dilute carbolic acid..... 5
Simple syrup..... 100

105. Syrup Acid Hydriodic.

Iodide of potassium.... 123 grains.
Tartaric acid..... 112 grains.
Water ½ fl. ounce.
Diluted alcohol..... 1 fl. ounce.
Syrup glucose..... ¼ fl. ounce.
Syrup, enough to make. 16 fl. ounces.

Dissolve the iodide in the water, and the tartaric acid in one half the alcohol. Mix the solutions in a vial, cork, shake well and let stand in ice water for half an hour. Then shake again thoroughly and pour the mixture on a small filter and filter into a bottle containing the syrupy glucose and 13¾ fl. ounces syrup. Lastly, wash the vial and filter with the remainder of the alcohol, in small portions, and add enough syrup to make 16 fl. ounces.

106. Syrup Acid Hydriodic.

Sodium hypophosphite.... 2 grains.
Potassium iodide..... 140 grains.

Dissolve in water 62 drams and add glycerine 2 fl. ounces. Then add a solution of tartaric acid 127 grains in alcohol 6 drams and place in ice water for 3 hours. Filter and add sufficient simple syrup to make one pint.

One fluid ounce of this syrup contains 6.72 grains of hydriodic acid, equivalent to 6.66 grains of iodine the same strength as Gardner's preparation. Its advantages are said to be that the glycerine preserves the preparation, the precipitation by tartaric acid is complete, and the hypophosphite reduces all impurity of the iodate to iodide.

107. Syrup Acid Hydriodic.

Tartaric acid..... 240 grains.
Potassium iodide..... 300 grains.
Distilled water..... 3 ounces.

The acid and potassium salt are dissolved separately in half the quantity of water each. The solutions are then mixed, and the precipitate allowed to settle, then stirred up, again allowed to settle, and the clear liquor poured off through cotton wool. The funnel is packed tightly with the wool, so that the fluid only passes drop by drop, and a cover is kept over it. Make a syrup of

Refined sugar..... 2 pounds.

Distilled water..... 18 ounces.

And filter part of it, hot, into a warmed bottle. To this add part of the filtered liquor and shake, the two liquids being then added alternately, and agitated, un-

til the liquor is all used, and enough syrup is added to make 30 ounces. The preparation is white.

108. Syrup Acid Hydrobromic

Bromine 1 part.
Distilled water..... 20 parts.
Oil peppermint..... 1 part.
Sugar 38 parts.

Mix the bromine with the water and add the oil of peppermint in drops, agitating constantly, so that the reaction shall take place progressively, and the temperature shall not be raised too high. When the reaction is over, which is indicated by the disappearance of color, transfer the liquid to a wetted filter, and add the sugar. 100 parts of the product contain 13-5 parts of bromine.

109. Syrup Althaea.

Macerate 3 of althaea root in 40 of water for 12 hours; strain, press, and filter until 30 have passed through. To this add 64 of sugar; dissolve warm, and heat the syrup to boiling; when cold, skim and strain through flannel.

110. Syrup Aniseed

Oil of aniseed..... 8 minims.
Alcohol 2 ounces.
Carbonate magnesium..... 1 ounce.
Sugar 2 pounds.

Water, a sufficiency.

Dissolve the oil in the spirit, and put into a large bottle containing the magnesia, and 16 ounces of water; shake frequently for 4 hours, filter, and make the product up to 28 ounces by putting more water in the filter and allowing it to pass through. Finally dissolve the sugar in the filtrate without heat.

111. Syrup Apomorphine Hydrochlorate.

Apomorphine hydrochlorate 5 grains.
Dilute hydrochloric acid 2 fl. drams.
Rectified spirit 7 fl. drams.
Distilled water 7 fl. drams.
Syrup 18 fl. ounces.

Mix the rectified spirit and the distilled water, dissolve the hydrochlorate of apomorphine in the mixture by agitation, add the hydrochloric acid, and mix with the syrup.

112. Syrup Benzoin.

Rub tincture benzoin 1 fluid ounce, with magnesium carbonate 120 grains, and sugar 1 ounce; then triturate with 8 fluid ounces of water, filter, add 12 troy ounces of sugar, and dissolve with the aid of a gentle heat. When first made the syrup is of a somewhat lighter color than syrup tolu; but

upon straining it becomes of a golden yellow, slightly tinged with green. Its flavor is agreeable, vanilla like, and preferable to that of tolu.

113. Syrup of Bloodroot.

Coarsely powdered

blood root 8 ounces.

Acetic acid 4 ounces.

Water 5 pints.

Sugar (troy) 2 pounds.

Mix 2 fluid ounces of the acetic acid with a pint of water, and macerate the root for three days. Transfer to a percolator, and displace with the remainder of the water, previously mixed with the other half of the acetic acid. Evaporate on a water-bath to 18 fluid ounces, add the sugar and form a syrup.

114. Syrup of Buckthorn.

Juice of buckthorn berries

..... 4 pints.

Sliced ginger $\frac{3}{4}$ ounce.

Bruised pimento $\frac{3}{4}$ ounce.

Sugar 5 pounds.

Alcohol 6 fl. ounces.

Evaporate the juice to two pints and half. Add the ginger and pimento, digest four hours with a gentle heat, and strain. When cold, add the spirit; after two days decant the clear liquid and dissolve the sugar so as to make the specific gravity 1.32.

115. Syrupus Juglandis.

Extract of butternut leaves. 1 part.

Syrup 60 parts.

Dissolve the extract in the syrup.

116. Syrup Butternut Leaves Compound.

Extract of butternut leaves 4 parts.

Extract of brown (gray)

cinchona 2 parts.

Alcohol 4 parts.

Port wine 6 parts.

Syrup 180 parts.

Iodide of potassium 1 part.

Oil sugar of anise (1 part

oil and 50 parts sugar)..... 3 parts.

Mix the extracts with the alcohol, port wine and 10 parts of syrup. Dissolve the iodide of potassium and the oil sugar of anise in 170 parts of syrup and mix the two liquids.

117. Syrup Butyl (Croton) Chloral.

Butyl-chloral 2 grams.

Warm glycerine 6 grams.

Extract of licorice 4 grams.

Distilled water 43 grams.

Syrup 45 grams.

The preparation contains 2 per cent. of butyl-chloral.

118. Syrup Calcium Chlorhydrophosphate.

Hydrated, or gelatinous, phosphate of calcium is preferable to the ordinary precipitated phosphate. It is prepared by placing 106 parts powdered calcined bone in a mortar, adding, in portions, 100 parts hydrochloric acid, stirring constantly. Allow to stand 48 hours, wash with 2,000 parts water, filter; to the filtrate add 240 parts sodium carbonate, dissolve in 800 parts water, shaking constantly. Wash and drain, and gently dry the precipitate. This precipitate contains about two-thirds water and one-third phosphate. It is exhibited in pastilles, wine, syrup, etc.

For the syrup use the following:

Phosphate of calcium ... 12.5 grains.

Hydrochloric acid, q. s.

about 8. grams.

Distilled water 340. grams.

Sugar 630. grams.

Essence of lemon 10. grams.

The essence of lemon is made by maceration of 1 part of the rind of the fresh fruit in 2 parts 80 per cent alcohol, for 8 hours. Shake up the phosphate with the water, add the acid to dissolve (avoiding excess of acid) and finally add the sugar and essence lemon, and let stand till complete solution. Twenty grams of the syrup contain about .25 grams of the phosphate.

119. Syrup Calcium Iodide.

Lime 5 parts.

Iodine 2 parts.

Sugar 200 parts.

Water, q. s.

Triturate the lime to a fine powder with the sugar and gradually add 100 parts of water. Let the mixture stand for several hours, occasionally stirring; then filter. To the filtered liquid add the iodine, and when this is dissolved, 170 parts of sugar. Dissolve the latter without heat. The syrup is clear and colorless and should be kept in a well stoppered bottle.

120. Syrup Calcium Lactophosphate.

Lactic acid..... 19 fl. dram.

Phosphate of calcium,

precipitated 2 ounces.

Granulated sugar..... $3\frac{1}{2}$ pounds.

Hydrochloric acid,

Water of ammonia,

Water,

Distilled water, of each sufficient quantity.

Glycerine 5 per cent.

Mix the calcium phosphate with $1\frac{1}{2}$ pints of water, in $\frac{1}{2}$ gallon bottle, to which sufficient hydrochloric acid (about $3\frac{1}{2}$ ounces) is added to dissolve. Transfer to

an open crock (2 gallon) and add water sufficient to bring up the volume to about 6 pints. Add to this an excess of water of ammonia (about 5 ounces) to precipitate, stirring with a wood spatula or glass rod. Throw the mixture in a muslin strainer, tied over an open crock; when well drained, mix the magma once more with 6 pints of water and strain again, then add to the moist magma the lactic acid, dissolve and add enough distilled water to bring the volume to 34 fluid ounces, add the sugar, dissolve by agitation. When dissolved add the glycerine.

121. Syrup Calcium Lactophosphate.

Calcium carbonate..... 150 parts.
Lactic acid, sufficient, or.. 360 parts.
Phosphoric acid..... 196 parts.
Sugar 6545 parts.
Water, sufficient for.....10908 parts.

Mix the lactic acid with 1500 parts of water, and gradually add the calcium carbonate. If the mixture does not become clear, warm it gently, and add lactic acid, drop by drop, until a transparent solution is obtained. To this add the phosphoric acid previously mixed with 1400 parts of water, together with enough more water to make the whole weigh 4363 parts. Then add the sugar, and when this has dissolved with frequent stirring, filter the syrup through paper.

122. Syrup Carrageen Compound.

Horehound (Marrubium, U. S. P.)..... 1 ounce.
Liverwort (Hepatica, U. S. P.) 6 drams.
Water 4 pints.

Boll for 15 minutes, express, and strain, then add:

Carrageen (Chondrus, U. S. P.) 6 drams.

previously well washed with cold water. Boil again for 15 or 20 minutes, and strain through flannel, and add sugar, 1 pound (commercial) to each pint by measure.

123. Syrup Cascara Sagrada.

Liquid extract of cascara sagrada..... 4 fl. ounces
Liquid extract of licorice 3 fl. ounces.
Carminative tincture.... 2 fl. drams.
Syrup sufficient to make 1 pint (Imp.).

124. Syrup Castor, Compound.

Valerian water, 5 ounces; cherry laurel water, 2½ ounces; castor (dissolved in a sufficient quantity of spirit), 3 drams; white sugar, 15 ounces.

125. Syrup Catechu.

Syrup of catechu is prepared by triturating 6 drams of finely powdered catechu with 6 fluid drams of glycerine, followed with 4 fluid ounces of cinnamon water, and filtering the solution, in which 7 ounces of sugar is dissolved by gentle heat, and straining the syrup while hot.

126. Syrup Chamomile.

Chamomile flowers, dried, 1 pound; boiling water, 10 pounds; macerate, strain with expression, and form the infusion into a syrup with twice its weight of sugar.

127. Syrup Coca.

Coca leaves..... 100 grams.

Boiling water.....1000 grams.

Infuse 24 hours, express, filter, and dissolve 175 grams of sugar in each 100 grams of filtrate.

128. Syrup Codeine.

Codeine 20 grains.

Dilute alcohol..... 1¼ fl. ounces.

Distilled water..... 1¼ fl. ounces.

Syrup to make..... 20 fl. ounces.

129. Syrup Coltsfoot.

Flowers of coltsfoot, 1 pound, (or dried flowers, 2 ounces); boiling water, 2 pounds; macerate for 12 hours; strain, press, filter, and add of white sugar, 4 pounds.

130. Syrup Copaiba.

Triturate 2 ounces of copaiba with ½ ounce of powdered gum and 1½ ounces of water; add 32 drops of essence of peppermint, and 12 ounces of simple syrup.

131. Syrup Corn Silk.

Beat 2 ounces of green corn silk to a pulp with 8 fl. ounces of a mixture of 6 ounces of water and 2 ounces of alcohol (by weight). Transfer the pulp to a percolator, macerate for 24 hours, then percolate by the aid of sufficient menstruum of the same strength until 8 ounces of percolate are obtained. In this dissolve 8 ounces of sugar by agitation.

132. Syrup Cubebs.

Cubeb berries,

in No. 30 powder..... 2 troy ounces.

Percolate with a mixture of

Water 8 parts.

Alcohol 1 part.

Until 8 fl. ounces are obtained. In this tincture dissolve by agitation, without neat, Granulated sugar.... 12 troy ounces.

Strain.

133. Syrup of Dandelion Compound.

Boneset 2 ounces

Ginger ½ ounce.

Cloves ½ ounce.

Water 1½ pints.

Simmer away one-third, strain and add
 White sugar..... 6 ounces.
 Extract of dandelion..... 4 ounces.
 Best brandy..... 8 ounces.

134. Syrup Ether.

Ether, stronger..... 1 part.
 Syrup 15 parts.
 Mix the ether with the alcohol, then add the syrup and mix by agitation.

135. Syrup Eucalyptus.

Eucalyptus leaves..... 5 parts.
 Sugar q. s.
 Water q. s.
 Pour 50 parts of boiling water upon the eucalyptus, let it macerate for 1 hour, then strain and express. For every 12 parts of liquid so obtained, add 20 parts of sugar and dissolve.

136. Syrup Frostwort.

Frostwort (the herb)..... 4 ounces.
 Water,
 Alcohol,
 of each a sufficient quantity.
 Sugar 16 ounces.
 Macerate the bruised herb in 8 fl. ounces of diluted alcohol, for 24 hours; percolate with a mixture of 1 part of alcohol to 3 of water, till the liquid comes over nearly free from the taste and color of the plant; then evaporate to 1 pint, add the sugar, boil for a minute or two, and strain.

137. Syrup Fucus Vesiculosus.

Extract of seawrack..... 1 part.
 Water 1 part.
 Syrup 7 parts.
 Dissolve the extract in the water and add the syrup.

138. Syrup Gillenia

Gillenia root..... 2 ounces.
 Diluted alcohol..... 1 pint.
 Sugar 30 troy ounces.
 Water, sufficient quantity.
 Reduce the gillenia to coarse powder, treat it by displacement with diluted alcohol till 1 pint is obtained. Evaporate to 6 ounces, filter, and add sufficient water to make the liquid measure 1 pint, then add the sugar and dissolve by the aid of heat.

This syrup has the same proportion of the medicinal ingredient contained in syrup of ipecacuanna, which it resembles in properties, though less agreeable to the taste.

139. Syrup Grindelia Robusta.

Fluid extract grindelia
 robusta 4 ounces
 Magnesium carbonate..... 1 ounce.
 Sugar 11 ounces.
 Water, enough to make.. 16 ounces.

Triturate the fluid extract with the carbonate of magnesium and add about 7 ounces of water, stirring well; then filter, adding enough water through the filter to make the filtrate measure 9 fluid ounces; to this add the sugar, dissolve by agitation without heat, and strain.

140. Syrup Guarana.

Can be made by mixing 15 parts of tincture guarana with 85 parts of simple syrup.

141. Syrup Guarana.

1 part of extract of guarana dissolved in 9 parts diluted alcohol to which are added 90 parts simple syrup.

142. Syrup Horehound and Linseed.

Boil together for 10 minutes 1 ounce of horehound, 2 ounces linseed and 1 pint of water. Strain when cold and dissolve 1 pound of sugar in the decoction. The product should measure 30 ounces; to this add 5 ounces fluid extract glycyrrhiza, 1 ounce essence of anise, 1 ounce spirit of chloroform, and 3 ounces diluted alcohol. Shake well and allow to stand a day before bottling.

143. Syrup Horseradish, Iodized.

Iodine 1 gram.
 Alcohol 90 per cent..... 11 grams.
 Compound syrup of horseradish (prepared according to the French Pharmacopoeia) 988 grams.
 Dissolve the iodine in the alcohol and add the solution to the syrup. After 24 hours, combination has taken place, and the original color of the syrup is restored.

144. Syrup Iodide of Starch.

Soluble iodide of starch. 10 grams.
 Distilled water 350 grams.
 Granulated white sugar.. 640 grams.
 Dissolve the iodide of starch in the distilled water and filter. Dissolve in this the sugar by means of very gentle heat. Twenty grams, or a tablespoonful of this syrup, contains about 0.2 gram (one-third grain) of iodine.

145. Syrupus Iodo-tannicus.

Iodine 1 gram.
 Alcohol 90 per cent..... 11 grams.
 Syrup of krameria..... 988 grams.
 Dissolve the iodine in the alcohol and mix the solution with the syrup. It requires about 24 hours at ordinary temperature, until the iodine has entered the combination, but on warming to 50 or 60 degrees C. this may be accomplished at once. This syrup contains 1 part of iodine in 1,000 parts.

146. Syrup Ipecac.

Ipecac root..... 1,000 grams.
 Alcohol, 60 degrees..... 500 grams.
 Distilled water..... 3,850 grams.
 Sugar 7,500 grams.

Grind the root to a coarse powder, moisten with alcohol and allow to remain 12 hours. Replace the alcohol with cold distilled water, saving the aqueous and alcoholic liquids separately. Filter each solution, dissolve the sugar in the aqueous solution, heat, cool, and add the alcoholic tincture.

147. Syrup Ipecac Compound.

Syrup ipecac..... 10.0.
 Syrup red poppy..... 20.0.
 Syrup senna..... 40.0.
 Syrup orange flower..... 5.0.
 Magnesium sulphate..... 1.0.

148. Syrup Iron Albuminate and Soda.

White of one egg.
 Sugar ½ ounce.
 Tincture of chloride of iron ½ ounce.
 Solution of soda and water, each a sufficient quantity.

Mix the egg with the sugar, adding water enough to effect the solution; add the tincture of iron, and then just sufficient soda to dissolve the coagulated albumen; finally water q. s. to make 1 ounce.

149. Syrup Iron Bromide.

Iron wire, free from oxide. ½ ounce.
 Bromine 553 grains.
 Refined sugar 14 ounces.
 Distilled water q. s.

Dissolve the sugar in 6 ounces of distilled water, by the heat of a water-bath. Put the iron wire with 4 ounces of distilled water into a glass flask, having a capacity of at least a pint, and surround it with cold water. Then add the bromine in successive quantities; shake occasionally until the froth becomes white, and the reaction is complete. Filter the solution into the warm syrup, and add, if necessary, distilled water to produce a pint. Each fluid dram contains about 4½ grains of iron.

150. Syrup Iron (Ferrous) Chloride.

Iron wire, 300 grains; hydrochloric acid, 2 fluid ounces; citric acid, 10 grains; distilled water, 10 fluid drams; syrup sufficient. Mix the hydrochloric acid with 1 ounce of water in a flask, add the iron wire, and apply heat gently until action ceases. Remove the flask from the source of heat, add the citric acid, filter the solution through a small paper filter into 10 fluid ounces of the syrup, pass the remainder of the water through the filter into the

syrup, add sufficient syrup to make 1 pint (20 fluid ounces), and mix thoroughly.

151. Syrup Iron (Ferrous) Chloride.

This syrup is prepared by two methods. First, by dissolving iron wire in diluted hydrochloric acid, and adding the solution thus obtained to thick simple syrup; and, secondly, mixing together solution of perchloride of iron in certain proportions with glycerine and syrup, and exposing this to the rays of the sun until colorless, when the sugar of the syrup will have changed the ferric to the ferrous chloride. The first method produces the most permanent and satisfactory results, and may be carried out as follows:

Take of iron (wire)..... 280 grains.
 Water 4 fl. ounces.

Heat them together in a flask of the capacity of 12 fluid ounces, and for about 6 hours at a temperature of 212 degrees F. When the iron is all dissolved, filter the liquid and add to it enough simple syrup to measure 40 fluid ounces. The simple syrup is prepared by dissolving 3½ pounds of sugar in 28 fluid ounces of water.

152. Syrup Iron Chloride and Potassium Chlorate.

Tincture iron chloride..... 4 drams.
 Potassium chlorate 1½ drams.
 Glycerine 2 ounces.
 Water 2 ounces.

152 1-2. Syrup Iron Iodide.

The following table, showing the strength of syrup of iodide of iron according to various different standards, is instructive:

Pharmacopoeia of	Percentage of ferrous iodide.
Holland	20.00
Austria	12.50
United States	10.00
Great Britain	5.71
Germany	5.00
Italy	5.00
Switzerland	1.00
France	0.50

153. Syrup Iron (Ferrous) Iodide.

Iodine 875 grains.
 Iron wire (card teeth). 300 grains.
 Water 3 fl. ounces.
 Glucose (solid) 2 troy ounces.
 Syrup, a sufficient quantity to make ... 1 pint.

Mix the iodine, iron and water in a flask; shake occasionally until the reaction has ceased, and the liquid has lost its iodine odor. Then heat to 212 degrees F. (100 degrees C.), filter into a capsule containing the glucose finely cut up, dissolve at a low heat on a water-bath, and add sufficient syrup to make the desired quantity.

154. Syrup Iron (Ferrous) Iodide.

Solution of ferrous iodide... 6 parts.
 Syrup of orange flower
 water 24 parts.
 Simple syrup 70 parts.

155. Syrup Iron Iodide, Tasteless.

Iodine 378.9 grains.
 Iron (card teeth)..... 90.0 grains.
 Acid citric, dry..... 408.0 grains.
 Potassium carbonate,
 pure 475.0 grains.
 Distilled water..... q. s.
 Syrup, to make..... 26 ounces.

Weigh accurately 252.6 grains iodine and place in a flask of 4 ounce capacity. Add the iron and $\frac{1}{2}$ ounce distilled water; cover with a piece of glass and agitate occasionally until reaction has ceased and the mixture has acquired a green color.

156. Syrup Iron Iodide and Quinine.

Iodine 1 dram
 Fine iron wire, free from
 rust $\frac{1}{2}$ dram.
 Distilled water..... 4 drams.

Digest together in a bottle with agitation, until the solution is colorless. Rapidly filter into

Simple syrup..... 28 ounces.

Add to the syrup thus prepared the following solution of quinine:

Quinine sulphate..... 12 grains.
 Dilute sulphuric acid..... 15 drops.
 Distilled water..... 2 drams.

Preserve in a stoppered bottle.

157. Syrup Iron Lactophosphate.

Solution tersulphate
 iron U. S. P..... 16 fl. ounces.
 Water 48 fl. ounces.

Precipitate with

Phosphate soda..... 130 av. ounces.
 dissolved in water.... 64 fl. ounces.

Strain, wash the precipitate and add

Concentrated lactic acid 16 av. ounces.
 Water, q. s..... 1 gallon.

When dissolved, filter to 1 gallon and add:

White sugar..... 12 pounds.
 Orange flower water.... 16 fl. ounces.
 Acid muriatic dilute.... 4 fl. ounces.

When sugar is dissolved, strain.

158. Syrup of Lactophosphate of Calcium and Iron.

Syrup of iron lactophosphate is first made as follows: Dissolve 5 parts of lactate of iron in 40 phosphoric acid, add simple syrup 160 parts, oleosaccharate of lemon 4 parts, and simple syrup enough to make 1,000 parts. To this syrup is added the

syrup of lactophosphate of calcium, made as follows: Calcium lactophosphate 3 parts, citric acid 1.2 parts, simple syrup to make 1,200 parts; flavor with oil of lemon.

159. Syrup Iron Oxide.

A mixture of equal parts of soluble saccharate of iron, water and syrup. A dark red brown syrup, 100 parts of which contain 1 part of iron.

160. Syrup Iron and Quinine.

Acid hydrobromate of
 quinine 160 grains.

Diluted hydrobromic
 acid 1 fl. ounce.

Distilled water..... 1 fl. ounce.

Mix the diluted hydrobromic acid with the distilled water, and in the mixture dissolve the acid hydrobromate of quinine, then add syrup of bromide of iron sufficient to produce 1 pint. Each fluid dram contains 1 grain of hydrobromate of quinine, and about 4 grains of bromide of iron.

161. Syrup Juniper.

Juniper juice, inspissated..... 40.0
 Glycerine 10.
 Syrup 50.

162. Syrup Lactucarium.

Rub together 5 parts of lactucarium and sugar in coarse powder, and add to 100 parts of syrup in an evaporating dish, place on a water bath at a temperature of 140 degrees F. for 6 hours, strain while warm, and add sufficient water to make 100 parts.

163. Syrup Lactucarium.

Prepare a concentrated tincture of lactucarium in the following manner: Powder 100 grams of lactucarium in an iron mortar, with an equal weight of pumice stone, and place in a bottle with 400 cubic centimeters of benzoin. Cork the bottle, and let it stand two or three days, shaking at intervals. Decant upon a double paper filter, drain and wash residue with 100 to 150 cubic centimeters of fresh benzoin. Dry the purified lactucarium, rub up once more in an iron mortar, using a little more pumice if necessary, and pack lightly in a conical percolator. Mix glycerine 25 cubic centimeters, water 75 cubic centimeters, alcohol 100 cubic centimeters. Cover the powder with this mixture, cork the percolator and allow to macerate 24 hours. Then percolate with the above menstruum, following with dilute alcohol, and reserving the first 125 cubic centimeters of the percolate. Evaporate the dilute percolate on a water bath at about 160 degrees F. to 75 cubic centimeters, and mix with the

reserved portion. Filter and add enough dilute alcohol to make the product measure 200 cubic centimeters.

To prepare the syrup, take of

concentrated tincture of
lactucarium 10 grams.
Syrup 90 grams.

164. Syrup Lactucarium.

Lactucarium 5 parts.
Ether 5 parts.
Alcohol 3 parts.
Sugar 65 parts.
Orange flower water and water, of
each sufficient.

To the lactucarium contained in a flask or other vessel capable of being tightly closed, add the ether and macerate with occasional agitation for 24 hours, at the end of which time add 10 parts of water, and, having shaken the flask well, distill off the ether by the immersion of the flask in hot water, heat being continued for a short time after the odor of the ether has entirely disappeared; when cool add the alcohol and again macerate for 24 hours, with frequent agitation. Then transfer the contents of the flask to a percolator, and, when the liquid has ceased to pass, gradually pour on orange flower water until 30 parts of percolate are obtained; set this portion aside and continue percolation with water until the percolate passes tasteless, evaporate the last portion to 5 parts and add to the portion set aside. Filter the mixture, and pass through the filter a sufficient quantity of orange flower water to make the filtrate weigh 35 parts. Having placed the sugar in a percolator, pour upon it the menstruum, cover well, and set aside that a syrup may be formed.

165. Syrup Lactucarium.

Allen's lactucarium.... 1 troy ounce.
Powdered quartz..... 2 troy ounces.
Magnesium carbonate. 2 drams.
Sugar granulated..... 13 troy ounces.
Ether 1½ fl. ounces.
Glycerine 2 fl. ounces.
Alcohol dilute,
Water, each a sufficient quantity.

Reduce the lactucarium to a fine powder with the powdered quartz, macerate for several days with the ether, decant as much as possible of the ethereal solution, add 2 fluid ounces of water, and remove excess of ether by cautious evaporation. When this has been done add to this liquid glycerine 2 fluid ounces, diluted alcohol 8 fluid ounces, sugar 1 troy ounce, and magnesium carbonate 2 drams. Place in a tightly stoppered bottle or flask, digest in a water bath, at a temperature not exceeding 130 degrees F., for 12 hours.

Displace in a glass funnel through absorbent cotton, evaporate the percolate down to 6 fluid ounces, make up to 10 fluid ounces with dilute alcohol, filter and add 12 troy ounces of sugar to the filtrate, dissolving with the aid of heat. Lastly, add, when cold, enough syrup to make the finished product measure 1 pint.

166. Syrup Licorice.

Dissolve 120 parts of extract of licorice (which should be entirely soluble in water) in 80 parts of distilled water, and add in portions 200 parts of alcohol and 5 parts of ammonia, constantly stirring; filter, and to the filtrate add sufficient simple syrup to make 1000 parts.

167. Syrup Licorice.

Licorice mass..... 2 troy ounces.
Borax 120 grains.
Sugar 24 troy ounces.
Water to make..... 2 pints.

Separate the licorice mass into small fragments. Add the borax and 20 fluid ounces of water, and apply a gentle heat with constant stirring until all the fragments have dissolved. Make up the measure to 1 pint and set the mixture aside. When clear decant from sediment, and dissolve the sugar in the fluid by aid of a moderate heat.

168. Syrup Licorice, Aromatized.

Fluid extract of licorice root, 4 fluid ounces; fluid extract of coriander, 60 minims; fluid extract of fennel, 30 minims; fluid extract of cardamom, 60 minims; fluid extract of aniseed, 30 minims; powdered biborate of sodium, 60 grains; simple syrup, U. S. P., q. s., 2 pints.

169. Syrup Licorice Extract.

Mix 4 fluid ounces of glycerine and 12 fluid ounces of water; dissolve 2 troy ounces of extract of licorice in the mixture, in which, after filtration, dissolve 24 troy ounces of sugar by agitation.

170. Syrup Manganese Malate.

Malate of manganese..... 1 ounce.
Simple syrup..... 16 ounces.
Essence of lemon..... 2 drams.

An ounce of the syrup contains 30 grains of the manganese compound. The malate is obtained by treating carb. manganese with malic acid.

171. Syrup Manganese Phosphate.

Phosphate of manganese. ½ dram.
Syrup of tolu..... 27 drams.
Syrup of cinchona..... 5 ounces.
Essence of lemon..... 1½ drams.
Powdered tragacanth..... 10 grains.

This preparation must be quickly made

and kept well stoppered. The phosphate is obtained by decomposing a solution of phosphate of sodium with sulphate of manganese, collecting the precipitate, drying, and keeping in a well stoppered bottle.

172. Syrup Marshmallow.

Althaea root,
fresh and sliced..... 8 ounces.
White sugar..... 2½ pounds.
Boiling water..... 4 pints.

The root is boiled with the water, until the quantity of the latter is reduced to 2 pints; it is then strained and pressed, set aside for impurities to settle, then strained again, and the sugar dissolved in the clear liquor by gentle heat. Half the quantity of dried root can be used instead of the fresh root, but the latter makes the better syrup.

173. Syrup Matico and Pomegranate Bark.

According to Perret, this syrup is one of the surest and most effective astringents against dysentery, cholera morbus, acute diarrhoea, etc. It is employed in tablespoonful to wineglassful doses, either pure or diluted with water.

Matico leaves..... 20 parts.
Pomegranate bark..... 120 parts.
Boiling water..... 1,200 parts.
Sugar 2,000 parts.

Infuse the matico and pomegranate in the boiling water for 24 hours, filter the infusion, and dissolve the sugar in the filtrate.

174. Syrup Myrrh.

Tincture of myrrh..... 2 drams.
Magnesium carbonate..... 1 dram.
Sugar 12 ounces.
Water sufficient.

Rub the tincture with the magnesium carbonate, afterward with 8 ounces of water, filter and dissolve in the filtrate the sugar. The syrup should measure 15 fluid ounces. It has an agreeable flavor, makes a good vehicle for administering nauseous medicines, and can be made to take the place of syrup of tolu.

175. Syrup Narceina.

Narceina 1 gram.
Water (containing 6 grams
per liter of HCl. sp. g.
1.16) 100 grams.
Water 250 grams.
Sugar 650 grams.

Dissolve the narceina in the acidulated water with heat, add the other water and the sugar so as to form a syrup.

176. Syrup Nickel Bromide.

Bromine 468 grains.
Granulated nickel..... 172 grains.
Water 16 fl. ounces.

Mix; promote the reaction by the aid of a very gentle heat; when complete, add

Sugar 24 troy ounces.
Strain and mix with sufficient syrup to measure 1 quart.

Each dram contains 5 grains bromide of nickel.

177. Syrup Orange Peel.

Macerate for eight days, 12 ounces of freshly grated orange peel in alcohol 20 ounces and water 5 pints; filter and dissolve without heat 10 pounds granular sugar.

178. Syrup Pepsin Lactated Compound.

A preparation of the above can be made from the following formula:

Lactated pepsin 512 grains.
Iron phosphate.....
Lime phosphate.....
Sodium phosphate.....
Potassium phosphate,
of each..... 128 grains.
Citric acid..... 10 grains.
Spirit of lemon..... ½ dram.
Sugar 12 ounces.

Water, a sufficient quantity to make one pint.

Dissolve the lactated pepsin in 8 ounces of water. Mix the phosphates, and dissolve them, by trituration, in the pepsin solution. Should there be a trifling residue undissolved, allow the solution to settle, pour off nearly all of it, and add the citric acid so that the residue may be dissolved. Then, having mixed the liquids, add the spirit of lemon, and filter through paper, adding through the filter enough water to make the liquid measure 10½ ounces. In this, dissolve the sugar by agitation, without heat, and strain.

179. Syrup Peru Balsam.

Balsam Peru..... 1 part.
Digest with
Hot water..... 10 parts.
For 24 hours at 15 degrees to 20 degrees C. and filter.
In the filtrate..... 8 parts.
Dissolve
Sugar 20 parts.

180. Syrup Poke Compound.

Poke root..... 1 pound.
Bark of American Ivy
(Ampelopsis) 1 pound.
Black cohosh root..... ½ pound.
Sheep-laurel leaves..... ½ pound.
Sugar 12 pounds.
Alcohol of 76 degrees sufficient.

To make 12 pints of syrup in a manner substantially the same as that above de-

scribed. The dose as an alterative is a teaspoonful three times a day, in two ounces of water.

181. Syrup Quassia Compound.

Bloodroot 1 ounce.
Senega 1 ounce.
Rhubarb 1 ounce.
Licorice 1 ounce.
Quassia 1 ounce.
Water 2 pints.
Boil and strain, add
Sugar 16 ounces.
And form syrup.

182. Syrup Quinia.

Sulphate of quinia..... 8 grains.
Distilled water..... 1 fl. dram.
Aromatic sulphuric acid... 6 drops.
Dissolve and add to
Syrup 25 drams.

183. Syrup Quinia.

Sulphate of quinia..... 16 grains.
Syrup of ginger..... 2 fl. ounces.

184. Syrup Rhubarb, Aromatic.

Rhubarb 20 parts.
Cinnamon 4 parts.
Cloves 4 parts.
Nutmeg 2 parts.
Reduce to powder No. 40,
moisten and percolate
with a menstruum com-
posed of
Glycerine 40 parts.
Alcohol 70 parts.
Water 120 parts.

Continue percolation with water until 420 parts percolate are obtained, in which dissolve 610 parts of sugar without heat.

185. Syrup Rhubarb and Senna.

Bruised rhubarb..... 1 ounce.
Senna 2 ounces.
Fennel seed,
Bruised cinnamon,
each 2 drams.
Boiling water..... 2½ pints.
Macerate for 12 hours, strain, and add
Sugar 3 pounds.
Make syrup.

186. Syrup Rue.

Coarsely powdered sugar. 15 ounces.
Tincture of rue..... 2 fl. ounces.
Distilled water..... 7 fl. ounces.
Dissolve and strain.

187. Syrup Saccharin.

Dissolve 10 parts of saccharin with 11 parts of carbonate (or 12 parts of bi-car-

bonate) of sodium in 1,000 parts of distilled water at a temperature of 104 degrees F.

188. Syrup Sarsaparilla Com-pound.

Sarsaparilla 2 pounds.
Bittersweet ½ pound.
Pipsissewa ½ pound.
Guaiacum 4 ounces.
Licorice root..... 4 ounces.
Sassafras 2 pounds.
Partridge-berry leaves.... 2 pounds.
Sugar 12 pounds.

Reduce the ingredients to coarse powder, macerate them in diluted alcohol for 2 days, put in a displacement apparatus, and displace slowly until 2 gallons of liquid have passed. Evaporate on a water-bath till reduced to 6 pints, then add the sugar, and form a syrup.

189. Syrup Sarsaparilla Com-pound.

Taraxacum 16 ounces av.
Chimaphila 16 ounces av.
Stillingia 32 ounces av.
Sarsaparilla 32 ounces av.
Phytolacca 16 ounces av.
Lappa 16 ounces av.
Xanthoxylum berries... 8 ounces av.
Potassium iodide..... 30 ounces av.
Sugar 15 pounds av.
Alcohol,
Water, of each, suffi-
cient to make..... 3 gallons.

Exhaust the drugs, ground in a coarse powder and contained in a percolator, with 32 pints of a mixture of 12 pints of alcohol and 20 pints of water. Continue the percolation with water until 32 pints of percolate is obtained. In this dissolve the potassium iodide and sugar; strain, and add sufficient water to make 40 pints.

190. Syrup Sarsaparilla Com-pound.

Potassium iodide..... 320 grains.
Water 2 ounces.
Fluid extract burdock.... 2 ounces.
Compound syrup sarsapa-
rilla 8 ounces.
Dextrine syrup, sufficient
to make..... 16 ounces.

191. Syrup Senega—Improved Formula.

Senega, No. 30 powder..... 250 parts.
Percolate with a menstruum, consisting of dilute alcohol, 1,900 parts, and aqua ammonia (960 specific gravity), 15 parts. Filter the percolate through absorbent cotton; evaporate to 480 parts; add glycerine, 150 parts, and sugar 720 parts, and dissolve cold.

192. Syrup Senna.

Senna leaves..... 33 troy ounces.
 Boiling water..... 36 pints.
 Alcohol 14 fl. ounces.
 Sugar 36 troy ounces.
 Oil of coriander..... 20 grains.

Upon the senna leaves pour 24 pints of boiling water, cover well and stand 6 hours, express, and upon the residue pour 12 pints of boiling water, cover well and after 3 hours, express, and evaporate the mixed liquids at 140 degrees F., to 40 fluid ounces. When cold add 10 fluid ounces alcohol, set aside covered over night. By filtration remove the precipitated matter, washing the filter with a mixture of alcohol, 1 part, water 4 parts, to make 40 fluid ounces. To this add 4 fluid ounces alcohol, holding the oil coriander in solution, transfer to a bottle of sufficient capacity to hold the liquid, add the sugar and dissolve by shaking.

193. Syrup Senna and Manna.

Fluid extract senna..... 1 ounce.
 Spirit of fennel..... 30 minims.
 Spirit of coriander..... 30 minims.
 Manna 5 ounces.
 Sugar 6¼ ounces.
 Hot water..... 4 ounces.

Dissolve manna and sugar in the hot water; strain and add the fluid extract and spirits, and enough water to make 10 fluid ounces.

194. Syrup Squills Compound.

Vinegar of squill..... 16 fl. ounces.
 Tartrate of antimony
 and potassa..... 24 grains.
 Fluid extract of sene-
 ga 2 fl. ounces.
 Sugar 20 troy ounces.
 Distilled water..... 11 fl. ounces or
 sufficient quantity.

Water of ammonia, sufficient quantity.

Evaporate the vinegar of squill to the consistency of a soft extract; dissolve this in 11 fluid ounces of warm distilled water and filter. In the filtered liquid dissolve the sugar with heat and dissolve the tartrate of antimony and potassa in the syrup while still hot, adding sufficient water to make the whole measure 22 fluid ounces. To this, when cold, add the fluid extract of senega exactly neutralized with the water of ammonia, and mix thoroughly.

195. Syrup Stilllingia Compound.

Fluid extract stillingia.. 1 fl. ounce.
 Fluid extract corydalis.. 1 fl. ounce.
 Fluid extract blue flag.. ½ fl. ounce.
 Fluid extract elder flowers ½ fl. ounce.

Fluid extract princes pine ½ fl. ounce.
 Fluid extract prickly ash
 berries ¼ fl. ounce.
 Fluid extract coriander.. ¼ fl. ounce.
 Sugar 14 ounces.
 Water, quantity sufficient.

Mix the fluid extracts and add water to make 6½ fluid ounces; filter if need be and wash to obtain 6½ fluid ounces. In this dissolve the sugar, using as little heat as possible, and add water to make 1 pint.

196. Syrup Stilllingia Compound.

Queen's root 2 pounds.
 Turkey corn root 2 pounds.
 Blue flag root 1 pound.
 Elder flowers 1 pound.
 Pipsissewa leaves 1 pound.
 Coriander seeds 8 ounces.
 Prickly ash berries 8 ounces.
 Sugar 24 pounds.
 Alcohol of 76 degrees, sufficient.

Grind and mix the drugs, cover with enough alcohol to soak them, and macerate for three days. Then transfer the whole to a percolator and gradually add alcohol until 4 pints of alcoholic tincture have been obtained, which retain and set aside. distill or evaporate the alcohol from it. Continue the percolation with water, and of this second percolate reserve as much as contains a sensible amount of spirit, and distill or evaporate the alcohol from it. Continue the displacement by water until the percolate is almost tasteless, and boil down the weaker liquor until, when added to the second liquor deprived of its alcohol, it will make 24 pints. To these two liquids combined add the sugar, dissolve it by heat, carefully removing any scum that may arise, and if it exceeds 28 pints, evaporate to that measure, with constant stirring. Remove the syrup from the fire, and when it has become nearly cold add 4 pints of reserve alcohol tincture, and make four gallons of syrup, each pint of which will be equal to 4 ounces of the ingredients in medicinal virtue.

197. Syrup Stilllingia Compound.

Stillingia 4 pounds.
 Yellow dock 2 pounds.
 Pipsissewa 2 pounds.
 Blue flag root 24 ounces.
 Coriander 16 ounces.
 Corydalis 16 ounces.
 Prickly ash berries 16 ounces.
 Blood root 8 ounces.
 Sugar 34 pounds.
 Alcohol, 76 degrees, sufficient.

Make seven gallons of syrup in the way described above. This is known under the name of St. Louis Formula.

198. Syrup Strontium Bromide

Strontium bromide 30 parts.
 Syrup orange flowers 30 parts.
 Syrup orange peel 150 parts.

199. Syrup Tar.

Oil of tar (dark)..... ½ ounce.
 Magnesia carbonate ½ ounce.
 Sugar (granulated) 14 ounces.
 Hot water, a sufficient quantity.

Rub the oil with the magnesia and 2 ounces of the sugar, and add gradually 8 ounces of water. Allow the mixture to stand 12 hours and filter. In the filtrate dissolve the rest of the sugar without heat. This method furnishes a permanent, dark brown preparation of strong tarry odor and taste.

200. Syrup Tar.

This syrup may be made by mixing together 2 fluid ounces of glycerite of tar, with 14 fluid ounces of syrup.

201. Syrup Tar.

Wine tar (N. F.)..... 4 fl. ounces.
 Syrup, enough to make.. 16 fl. ounces.

This syrup contains about the same proportion of tar as that given in the formula for syrup of tar in the U. S. Pharmacopoeia.

202. Syrup Tar and Wild Cherry.

Glycerole tar..... 60 parts.
 Tolu 60 parts.
 Syrup wild cherry..... 90 parts.
 Syrup squills..... 30 parts.
 Tincture opium..... 12 parts.
 Fluid extract ipecac..... 1 part.
 Fluid extract sanguinaria... 1 part.

203. Syrup Tar and Iodine.

Tar water.....350.
 White sugar.....600.

Make a syrup in a porcelain or glass vessel.

Add to the syrup thus made:

Tincture iodine..... 10.0
 Glycerine 50.0

204. Syrup Tolu.

Balsam of tolu..... 50 parts.
 Ether 50 parts.
 Glycerine100 parts.
 Simple syrup.....200 parts.

Dissolve the balsam in the ether and add the glycerine, cork the flask loosely, and leave the mixture in contact for 6 days, agitating it strongly and frequently. Transfer the liquid to a funnel provided with a stopcock, allow to stand until separated, remove the supernatant balsamic liquid and add the syrup to the glycerine which now contains all the soluble portion

of the balsam. Strain and preserve. This concentrated syrup may be diluted as desired.

205. Syrup of Tolu.

Fifteen parts of balsam of tolu are dissolved in 30 parts of alcohol of 85 degrees in a suitable vessel at as low a temperature as possible; to the solution are added 100 parts of distilled or boiled and filtered water, and the whole distilled until 30 parts of highly aromatic alcoholic distillate are obtained. The still hot residue left in the vessel is then removed; this consists of an inodorous and insipid soft resin and a supernatant opaque and highly aromatic liquid, which, on cooling, separates some cinnamic acid (colored by resinous matter) amounting to about 1.15 per cent. of the original weight of the balsam. The liquid from which the acid has separated is first reduced by evaporation, if necessary, to 70 parts, then the cinnamic acid is dissolved in it by the aid of bicarbonate of sodium (about 110 parts of the latter for every 200 parts of the acid), and the alcoholic distillate added, which renders the liquid perfectly clear and transparent. This liquid has a faintly yellow color and possesses a most agreeable taste and odor (particularly if 14 parts of tolu and 1 part of benzoin have been used instead of 15 parts of tolu), and contains all the cinnamic acid in form of a soluble salt, as well as one of the resins held in solution by the excess of the alkaline salt. If the distillation is carried on at a high temperature, the aroma of the product is accompanied by a disagreeable odor of toluene, but this is easily avoided. To make the syrup use the following proportions:

Syrup950 parts.
 Alcoholate of tolu..... 50 parts.

The product far surpasses the insipid preparation of the Codex. As the balsamic properties of balsam of tolu are largely due to the cinnamic acid, the presence of the latter can easily be recognized by converting it into benzaldehyde by oxidizing agents.

206. Syrup of Tolu.

Balsam tolu..... 1½ fl. ounces.
 Alcohol 2 fl. ounces.
 Sugar, cut loaf..... 28 fl. ounces.
 Water, q. s..... 32 fl. ounces.

Digest the balsam with 12 ounces of water in a well covered vessel on a water bath, for two hours at a low temperature, not to exceed 180 degrees F. Pour off the liquid and, when cold, add 2 ounces of alcohol, shake well, let it stand for a while, and strain through a well wetted muslin strainer. Then add to the syrup.

Make syrup by placing sugar in a percolator; add 12 ounces of water, close lower end of percolator until sugar has become thoroughly saturated; then open and allow to drop through, and if sugar is not all dissolved, pour on a portion of that run through, and continue the operation until sugar is dissolved. This makes a fine syrup in appearance, delicate in flavor, and one that will keep for a long time. By this process, the acids contained in the liquids are dissolved and held in solution by the alcohol more completely than in other formulas that have been tested.

207. Syrup Tolu.

Balsam of tolu..... 4 parts.
Sugar, in coarse powder.... 65 parts.
Water, a sufficient quantity
to make..... 100 parts.

Place the balsam, contained in a small evaporating dish, in the body of a still of suitable size, and pour thereon 38 parts of water. Connect the condenser and apply heat until 35 parts of distillate have passed over. Pour the distillate upon the sugar, previously loosely packed in a suitable percolator, and allow percolation to proceed. When the liquid ceases to drop, pass enough water through the percolator to make the syrup weigh 100 parts and mix thoroughly.

208. Syrup Turpentine.

White turpentine..... 1 ounce.
Tincture of tolu..... 4 fl. drams.
Magnesium carbonate.... 4 drams.
Glycerine 2 fl. ounces.
Acacia 2 ounces.
Sugar 20 ounces.
Water, sufficient to make. 24 fl. ounces.

Triturate the turpentine, tincture of tolu and magnesium carbonate well together, gradually adding 6 fluid ounces of water, and filter. In the filtrate dissolve the sugar and acacia and add the glycerine and sufficient water to make 24 fluid ounces.

209. Syrup White Pine.

First prepare a tincture of white pine, as follows:

White pine turpentine
(gum thus)..... 2 ounces av.
Alcohol 14 fl. ounces.

Cut the gum in small pieces and dissolve in the alcohol by the aid of a water bath, or by macerating for two weeks in a warm place. The compound syrup of white pine is then made.

Sulphate of morphine... 8 grains.
Fluid extract of ipecac. ½ fl. ounce.
Chloroform 1 fl. dram.
Tincture white pine.... 2 fl. ounces.
Carbonate magnesium.. ½ ounce av.

Water 8 fl. ounces.

Sugar 14 ounces av.

Rub the carbonate of magnesium with 1 ounce of sugar to a fine powder in a mortar and add to it the tincture of white pine, rubbing them thoroughly together, then add the fluid extract, gradually rub the water with the mixture and filter; mix the chloroform with the sugar in a bottle, dissolve the morphine in the liquid, then mix the liquid with the sugar in the bottle and dissolve by agitation.

210. Syrup Wild Cherry

Steep 4 ounces wild cherry bark, well bruised, in 1 pint cold water, for 36 hours; press out the infusion; let it stand till clear; decant, and add 1½ pounds fine white sugar; mix and strain.

211. Syrup Wild Cherry.

Moisten 5 ounces wild cherry bark, in coarse powder, with water, and let it stand for 24 hours in a close vessel. Then pack it firmly in a percolator and pour water upon it until 1 pint of fluid is obtained. To this add 28 ounces sugar.

212. Syrup Wild Cherry Compound.

Fluid extract of wild
cherry 2½ fl. ounces.
Fluid extract of ipecac. ½ fl. ounce.
Fluid extract of blood
root ½ fl. ounce.
Sulphate of morphine... 8 grains.
Tartar emetic..... 2 grains.
Simple syrup, sufficient
to make..... 1 pint.

213. Syrup Wild Cherry Detan- nated

Wild cherry, No. 60
powder 16 troy ounces.
Sweet almonds..... 2 troy ounces.
Sugar 12 troy ounces.
Alcohol,
Water, of each, suf-
ficient to make..... 16 fl. ounces.

Macerate the bark with 4 fl. ounces of alcohol (85 degrees) and percolate with the addition of more alcohol until 3 pints have been obtained. Recover 2½ pints by distillation, add 8 ounces of water and evaporate until 8 ounces of liquid remain. Beat the almonds without blanching to a smooth paste with 4 fl. ounces of water, add this to the extractive solution, and shake the mixture occasionally for 24 hours. Throw the mixture upon a strainer, adding, if necessary, sufficient water to make the expressed liquid measure 12 fluid ounces; in this dissolve the sugar, without heat, and strain.

214. Syrup Wild Cherry and Horehound.

Wild cherry bark, coarse powder 4 ounces.
 Horehound, coarse powder 1 ounce.
 Glycerine 1 ounce.
 Alcohol 1 ounce.
 Sugar 12 ounces.
 Water, enough to make.. 16 ounces.

Mix the glycerine and alcohol with 8 ounces of water. Having moistened the drugs with a sufficient quantity of the menstruum, pack them in a percolator, add the remainder of the menstruum and enough water to make the percolate measure 10 ounces. In this dissolve the sugar, without heat, and strain.

215. Syrup Wintergreen.

Oil of wintergreen 25 drops.
 Simple syrup 5 pints.
 Burnt sugar, q. s. to color.

216. Syrup Wormwood

Wormwood 2 ounces.
 Boiling water 20 fl. ounces.

Infuse for six hours, strain, add for every 10 ounces of the filtered liquor 19 ounces of sugar, and make a syrup. Dose, a tablespoonful.

217. Syrup Yerba Santa.

Prepare from $\frac{1}{2}$ ounce of yerba santa, by maceration with cold water, 6 fluid ounces of infusion. Add to this a solution of 4 drops each of the volatile oils of lemon, cloves and sassafras in $\frac{1}{2}$ fluid ounce of alcohol; filter through purified talcum; add to the filtrate 13 troy ounces of sugar; dissolve without heat, and add through the filter previously used enough water to make the product measure 16 fluid ounces.

218. Syrup Yerba Santa.

Fluid extract yerba santa. 400 parts.
 Stronger water ammonia.. 4 parts.
 Sugar 600 parts.
 Water, enough to make... 1,000 parts.

To 300 parts of water add the ammonia; to this add the fluid extract, stirring constantly, and allow to stand in an uncovered vessel until the ammoniacal odor disappears. Filter, add water to weigh 400 parts, and dissolve the sugar by agitation.

219. Syrup Yerba Santa.

Fluid extract yerba santa. 4 ounces.
 Syrup, enough to make.... 32 ounces.

Heat the syrup to about 160 degrees F., add the fluid extract and let the mixture stand in a covered vessel for two or three hours, occasionally stirring, a temperature of 140 degrees F. being maintained. It may

be necessary to supply the loss of water through evaporation by the addition of a little water. When perfectly cool the syrup is strained.

220. Syrup Yerba Santa.

Fluid extract yerba santa. 2 ounces.
 Magnesium carbonate 1 ounce.
 Sugar 11 ounces.
 Water, enough to make.... 16 ounces.

Triturate the fluid extract with the carbonate of magnesium, and add about 7 fluid ounces of water, stirring well. Filter, adding enough water, through the filter, to make the filtrate measure 9 fluid ounces. In this dissolve the sugar by agitation, without heat, and strain.

221. Syrup Yerba Santa.

Yerba santa leaves.... 2 troy ounces.
 Sugar 24 troy ounces.
 Borax,
 Water of each sufficient to make..... 2 pints.

Contuse the yerba santa so as to form a coarse powder, and mix it with 2 drams of borax. Mix borax and water in the proportion of 2 drams of the former and 1 pint of the latter. Moisten the yerba santa with 2 fluid ounces of this solution and pack it firmly into a cylindrical glass percolator; then pour on the menstruum until 1 pint of percolate has slowly passed. Should this contain a pronounced precipitate add borax at intervals in small amounts until all or nearly all of the sediment has dissolved. Filter the liquid and add the sugar to 14 fluid ounces of it. Stir the mixture until most of the sugar has dissolved, and decant the syrup. On the residue pour the remaining filtrate, apply heat, and after solution add this syrup to the previous lot and strain.

222. Syrup Yerba Santa.

Erlodictyon leaves, in
 No. 40 powder..... 16 troy ounces.
 Potassium carbonate,
 Water of ammonia,
 Alcohol,
 Water, of each a sufficient quantity.

Mix the water of ammonia with the water in the proportion of 1 part of the former to 7 parts of the latter. Moisten the drug with 8 fluid ounces of this menstruum, and pack it firmly in a cylindrical percolator; macerate during 24 hours, then percolate slowly until 3 pints have passed. Add to this the potassium carbonate, and evaporate until a pasty residue is left. Mix this thoroughly with 8 fluid ounces of alcohol gradually added. Let the pasty precipitate subside, and decant the supernatant liquor; to the residue gradually add

8 fluid ounces as before. Pour this mixture on a strainer and force the liquid out. Should this second extraction measure more than is needed to complete the intended volume of fluid extract (16 fluid ounces), dissipate the excess of alcohol by appropriate means, unite the residue with the first extraction, set the mixture aside for 24 hours, and decant the clear fluid extract from the scant crystalline deposit meanwhile formed.

A syrup may be prepared according to the following formula:

Fluid extract of erio-	
dictyon	1 fl. ounce.
Calcined magnesia.....	$\frac{1}{2}$ av. ounce.
Water	$7\frac{1}{2}$ av. ounces.
Sugar	14 av. ounces.

Mix the fluid extract with calcined magnesia, and add the water gradually, with constant stirring; let it stand 24 hours and filter; add the sugar and dissolve with the aid of a gentle heat.

223. Syrup Yerba Santa, Aromatic.

Yerba santa.....	1 pound.
Bicarbonate of potassium.	2 drams.
Cinnamon	1 ounce.
Cloves	1 ounce.
Aniseed	4 drams.
Coriander seed.....	4 drams.
Cardamom	4 drams.
Cochineal	2 drams.
Sugar	6 pounds.
Water	1 gallon.

Boil the aromatics, except the cloves, with the yerba santa, bicarbonate of potassium, and water for an hour, add the cloves and cochineal, and continue to boil 20 minutes; strain, express, and add the sugar, dissolving it with gentle heat; lastly add water sufficient to make a gallon. A small quantity of brandy added when cold will improve the flavor of the syrup and keep it from souring.

224. Syrup Zinc Phosphate.

Zinc phosphate.....	192 grains.
Water	12 fl. drams.
Syrup phosphoric acid..	4 fl. drams.
Syrup to make in all....	12 fl. ounces.

Dissolve the zinc salt in the water and acid and filter into the syrup.

WINES.

225. Wine Aloes.

Aqueous extract of aloes.	$\frac{1}{2}$ oz. av.
Tincture of cardamom....	5 fl. drams.
Tincture of ginger	$\frac{1}{2}$ fl. ounce.
White wine, enough to	
make	$\frac{1}{2}$ pint.

Dissolve the extract in the wine and add the tinctures. The tinctures bring the alcoholic strength of the wine to that of the stronger white wine.

226. Wine Antiscorbutic.

Fresh horseradish root, 3 ounces; scurvy grass, $1\frac{1}{2}$ ounces; watercress leaves, $1\frac{1}{2}$ ounces; buck bean, $1\frac{1}{2}$ ounces; mustard seed, $1\frac{1}{2}$ ounces; chloride of ammonium, $5\frac{1}{2}$ drams; wine, 5 pints; compound spirit of scurvy grass, $1\frac{3}{4}$ ounces.

227. Wine Aromatic.

Aromatic species, 1 ounce; vulnerary tincture, 1 ounce; red wine, 10 ounces. For outward use 1 to 6 per cent of tannin may be added.

228. Wine of Bark.

Yellow bark, 3 ounces; proof spirit, 6 ounces (by weight). Macerate 24 hours, and add, red wine, 5 pints. Macerate for 10 days, shaking it occasionally; strain with expression, and filter.

229. Wine, Beef and Iron.

Extract beef	$4\frac{1}{2}$ fl. ounces.
Pyrophosphate iron.	2 fl. ozs. 64 grs.
Boiling water, q. s.	
to dissolve	
Curacao flavor.....	4 fl. ounces.
Tincture orange	
peel	4 fl. ounces.
Syrup	1 pt. 10. fl. ozs.
Alcohol	21 fl. ounces.
Solution citrate	
ammonia	4 fl. ounces.
Sherry wine, q. s. to	
make	8 pints.

230. Wine, Beef and Iron.

Extract of beef	$\frac{1}{2}$ troy ounce.
Wine of iron	1 pint.
Dissolve and filter.	

231. Wine, Beef and Iron.

Extract of beef	4 ounces av.
Phosphate of iron	645 grains.
Stronger white wine ...	52 fl. ounces.
Syrup	8 fl. ounces.
Tincture of fresh	
orange peel	8 fl. ounces.
Allspice, powdered	50 grains.
Cloves, powdered	15 grains.
Water, enough to make	5 pints.

Dissolve the extract of beef in a part of the water, and the phosphate of iron in the remainder of the water, using heat if necessary. Mix the solutions, add the wine, then the tincture of orange peel and the spices, macerate for four days and filter.

232. Wine, Beef and Iron.

Extract of beef 256 grains.
 Citrate of iron and ammonium 256 grains.
 Simple elixir 4 ounces.
 Angelica wine enough to make 1 pint.

Dissolve the extract of beef in 8 ounces of the wine, and the citrate of iron and ammonium in a little hot water; mix the solution, add the simple elixir, and finally enough wine to make the whole measure one pint. Let the mixture stand a few days, then filter.

233. Wine, Beef and Iron.

Extract of beef.... 2 troy ounces.
 Phosphate of iron (soluble scale).... 4½ troy ounces.
 Tincture of orange. 2 fl. ounces.
 Essence of lemon.. ½ fl. ounce.
 Syrup (simple)..... 26 fl. ounces.
 Alcohol 21 fl. ounces.
 Hot water, q. s.
 Wine (native) to make 128 fl. ounces.

Dissolve the extract of beef and the phosphate of iron, each separately, in about 8 ounces or more of hot water. Mix the solutions, and when cold add the native wine, tincture of orange and essence of lemon, and filter. To the filtrate add the syrup and alcohol previously mixed. The finished preparation is elegant in every respect, taste, color and odor; is readily made, and contains in each teaspoonful about 1 grain of extract of beef and 2 grains of phosphate of iron. The percentage of alcohol in the finished preparation will be about 20 per cent., depending on the alcoholic strength of the wine. The essence of lemon is made by repeatedly shaking 1 part of oil of lemon with 16 parts of 50 per cent. alcohol, then filtering through a small quantity of magnesia.

234. Wine Calisaya.

Calisaya bark..... 5 ounces.
 Percolate with the following mixture:
 Essence orange..... 1 ounce.
 Essence cassia..... 1 ounce.
 Tincture cardamom..... ½ ounce.
 Tincture angelica..... ½ ounce.
 Sherry wine..... 64 ounces.

Obtain by displacement ½ gallon of liquid then add:

Simple syrup..... 1 pint.

235. Wine Cascara Sagrada.

White gelatin, in strips.. 15 grains.
 Distilled water..... 2½ drams.
 Dissolve by the aid of heat, and add to:
 Sherry wine..... 28 ounces.

Shake well, set aside for some time, then add:

Tasteless fluid extract of cascara sagrada..... 1½ ounces.
 Sugar 1½ ounces.

Set aside in a cool place for eight days, and filter.

236. Vin Chinae Ferratum.

This popular tonic wine, which has gained considerable reputation on the European continent, is prepared as follows: Digest at a gentle heat

Pyrophosphate iron..... 5 parts.
 Citric acid..... 5 parts.
 Pyrophosphate soda..... 10½ parts.
 Glycerine 50 parts.
 Malaga wine..... 200 parts.

Until the salts are dissolved, and filter. Mix this with a filtered tincture, prepared by macerating

Red bark..... 50 parts.
 Orange peel (deprived of pulp)..... 15 parts.
 Malaga wine..... 750 parts.

Filter the mixture if necessary.

237. Wine Cinchona.

Cinchona bark, in powder. 1 ounce.
 Proof spirit..... 1 ounce.
 Glycerine 1 ounce.
 Brandy, best..... 1 ounce.
 Simple syrup..... 3 ounces.
 Distilled water..... 9 ounces.
 Sherry wine..... 16 ounces.
 Citric acid..... 10 grains.

The bark is macerated for two days in the water and proof spirit; it is then subjected to pressure, and one ounce more spirit and 9 ounces of water are poured over the residue, and again expressed. The fluids are mixed, evaporated to two ounces, set aside in a cool place for about two days, then filtered and evaporated to a thin extract consistence. It is dissolved by gentle heat in the glycerine, syrup and acid, and then the sherry and brandy are added, set aside for a fortnight, and filter.

238. Wine Cinchona.

Tincture cinchona..... 100 parts.
 Glycerine 100 parts.
 Sherry wine..... 300 parts.

Mix and let stand for three weeks and filter.

239. Wine Cinchona.

White gelatin..... 15 grains.
 Distilled water..... 2½ grains.
 Sherry wine..... 18 ounces.

Detannate, and add:

Simple syrup..... 8 ounces.
 Tincture of cinchona..... 6 ounces.

After eight days filter.

240. Wine Cinchona.

May also be made with red wine, or direct from the bark, the quantities being:

Gelatin	15 grains.
Distilled water.....	2½ drams.
Sherry wine.....	30 ounces.
Cinchona bark, in coarse powder.....	10 drams.
Sugar	1½ ounces.

Macerate for eight days and filter.

In this preparation care must be taken to have the gelatin and wine reaction complete before adding the cinchona, otherwise the alkaloid may be thrown out by the tannin of the wine.

241. Wine of Cinchona, Improved.

500 grams of cinchona bark are mixed with 50 grams of calcium hydrate and 500 grams of 70 per cent alcohol. After macerating 2 or 3 days, 10 liters of wine are added, and the mixture is shaken frequently for 8 days. It is then filtered and tartaric acid is added in the proportion of 7 grams to each 1,000 grams of filtrate. After standing for 8 days, it is again filtered, and then retains its brightness unchanged.

242. Wine Cinchona Compound.

Bruised yellow cinchona....	10 parts.
Bruised bitter orange peel..	1 part.
Bruised chamomile.....	1 part.
Alcohol of 80 per cent.....	10 parts.
Good white wine.....	90 parts.

Macerate for 10 days, express, and filter.
Dose, a tablespoonful.

243. Wine Cinchona, Ferrated.

Citric acid.....	4 grains.
Ammonio-citrate of iron...	1½ drams.
Cinchona wine.....	1 pint.

Mix, and allow to dissolve in the cold; set aside for a fortnight before filtering.

244. Wine Cinchona and Iron.

Wine of cinchona.....	200 parts.
Pyrophosphate iron.....	2 parts.
Citric acid.....	1 part.
Water	3 parts.

245. Wine Coca.

Fluid extract of erythroxy- lon	3 ounces.
Curacao bark.....	1 dram.
Claret wine.....	30 ounces.
Sugar	4 drams.

Mix and let stand for several days, then filter.

246. Wine Coca.

Fluid extract of erythroxy- lon	1 ounce.
Magnesium carbonate.....	2 drams.
Simple elixir.....	1 ounce.
Alcohol	1 ounce.
Wine, enough to make....	16 ounces.

Triturate the fluid extract with the carbonate of magnesium, then gradually add the simple elixir, mixed with 14 ounces of the wine, stirring well and filter. Lastly, mix the filtrate with the alcohol.

247. Wine Coca.

Coca leaves.....	3 ounces.
Brandy	1½ ounces.
Sherry	24 ounces.
Tokay wine.....	6 ounces.

Macerate for about a week, press, and to the liquor add 9 grains of citric acid; set aside for a few days more and filter.

248. Wine Coca.

Coca leaves..... 60 grams.

Red, or pure white wine, containing 10 to 15 per cent of alcohol, enough to make 1,000 liters. Macerate for 10 hours, then filter.

249. Wine Coca.

Fluid extract of coca....	1 ounce.
Compound elixir of dande- lion	1 dram.
Syrup of coffee.....	3 drams.
Port wine.....	2½ ounces.
Aromatic elixir.....	4½ ounces.
Sherry wine.....	7 ounces.

Mix, and allow the whole to stand several days in a cool place, then filter and pass enough sherry wine through the filter to make the product measure one pint.

250. Wine Coca.

Fluid extract coca.....	2 fl. ounces.
Fuller's earth.....	½ ounce.
Mix, then add:	
Claret	24 fl. ounces.
Port wine	4 fl. ounces.
Simple syrup	3 fl. ounces.

Mix and filter.

251. Wine Coca.

Coca leaves	30 parts.
Alcohol (60 per cent).....	60 parts.

Macerate 24 hours in a closed vessel, shaking frequently. Then add 910 parts pure white wine, let stand 10 hours longer and filter.

252. Wine Coca.

A good article:	
Fluid extract coca.....	5 pints.
Alcohol	5 pints.
Catawba	5 gallons.
With beef, add 3 ounces extract beef.	

253. Wine Coca.
 White sugar 1¼ ounces.
 Coca leaves, In No. 20
 powder 5 ounces.
 Proof spirit 2½ ounces.
 Claret wine, up to..... 20 ounces.
 Mix the spirit with 15 ounces of claret,
 moisten the powder with it and pack in a
 percolator, placing the sugar in the receiver.
 When the fluid commences to drop,
 close the orifice and allow to macerate
 for 21 hours. Then allow to percolate, adding
 more claret until 20 ounces of liquid
 have been collected.

254. Wine Coca.
 Fluid extract coca..... 1 ounce.
 Magnesia 1 ounce.
 Alcohol 3 ounces.
 Orange flower water..... 10 ounces.
 Syrup 10 ounces.
 Port wine 1 ounce.
 Rub the fluid extract with the magnesia
 and gradually add the alcohol, orange flower
 water and syrup, previously mixed; filter
 and add the port wine.

255. Wine Coca.
 Caracas cocoa beans..... 750 grams.
 Vanilla opt. 2 grams.
 Alcohol (56 per cent).... 4,000 grams.
 Macerate for 14 days; filter. To the residue
 add 1,000 grams hot water; filter. To
 the aqueous solution add 1,300 grams sugar,
 and after the latter has dissolved, add the
 alcoholic tincture.

**256. Wine, Cod Liver Oil and
 Pancreatin.**
 Florida orange wine..... 6 ounces.
 Cod liver oil..... 2 ounces.
 Extract pancreatin..... 20 grains.
 Shake thoroughly.

257. Wine Comfrey Compound.
 Fluid extract comfrey.. 100 minims.
 Fluid extract Solomon's
 seal 100 minims.
 Fluid extract helonias.. 100 minims.
 Fluid extract chamomile 50 minims.
 Fluid extract gentian... 50 minims.
 Fluid extract columbo... 50 minims.
 Fluid extract cardamom 50 minims.
 Fluid extract sassafras 50 minims.
 Sherry wine..... 15 fl. ounces.
 Mix, and after standing several days, filter
 and wash with sherry to obtain 1 pint.

258. Wine Condurango.
 Five pounds of coarsely ground condurango
 bark are macerated for two days with
 20 pints of water. The liquid is poured off,
 and the bark is boiled for one-half hour
 with a fresh quantity (20 pints) of water.
 This second liquid is mixed with the first.
 The bark is then macerated with 10 pints

of 94 per cent alcohol for a few hours, and
 pressed. The alcoholic liquid is mixed with
 the aqueous product and filtered. The alcohol
 is distilled off and the remainder evaporated
 to extract consistency. Finally, this
 extract is dissolved in 25 pints of Malaga
 wine. After 48 hours, filter.

259. Wine Condurango.

Macerate 1 part of finely cut condurango
 bark in 10 parts of sherry wine for 8 days,
 expressing and filtering. So obtained, it is
 a fluid having a yellow-red color, and the
 odor—particularly when heated—of the bark.

260. Wine Creosote

Wood creosote..... 6 parts.
 Compound tincture of
 gentian 30 parts.
 Alcohol 230 parts.
 Sherry wine 710 parts.

The dose of this preparation is a table-
 spoonful two or three times daily in a
 cupful of water.

261. Wine Creosote.

Better prepares creosote wine by first
 making a glycerite of creosote as follows:
 Ten parts of creosote, 20 parts alcohol, 10
 parts magnesium carbonate, 40 parts glyce-
 rine, and 40 parts of water are rubbed to-
 gether, the mixture agitated repeatedly dur-
 ing several days and filtered. Thirty parts
 of this filtrate (glycerite) of creosote are
 mixed with 30 parts of water, and 20 parts
 of syrup with 40 parts of white wine.

262. Wine Diastase.

Diastase, 5 grams; wine, 1,000 grams. This
 mixture is allowed to stand 24 hours, and is
 then filtered. A small wineglassful contains
 0.2 grams of diastase, and enough to trans-
 form 40 grams of starch, or 80 grams if the
 temperature is high enough and the starch
 is in the form of a paste.

263. Wine Gentian Compound.

Extract gentian 20 parts.
 Dissolved in
 White wine 900 parts.
 Then add:
 Tincture orange peel..... 60 parts.
 Tincture aromatic 20 parts.
 Filter.
 Add enough water to make 1,000 parts.

**264. Wine Gentian Wine Bitters
 Compound.**

Fluid extract gentian.... 128 minims.
 Fluid extract columbo... 64 minims.
 Fluid extract prickly ash 61 minims.
 Fluid extract rhubarb.... 64 minims.
 Fluid extract sassafras.. 64 minims.
 Fluid extract cardamom. 64 minims.
 Sherry wine q. s..... 1 pint

Mix, and after standing several days filter
 and pass enough sherry wine through
 the paper to obtain 1 pint.

265. Wine, Hops and Pepsin.

Fluid extract hops..... 1 fl. ounce.
 Soluble pepsin..... 64 grains.
 Water 1 ounce.
 Alcohol 1 ounce.
 Spirit orange (1 in 18)... 30 minims.
 Hydrochloric acid (10
 per cent.)..... $\frac{1}{2}$ dram.
 Sherry wine, q. s..... 1 pint.

Dissolve the pepsin in the water with the aid of hydrochloric acid; add slowly and with constant stirring, 10 fluid ounces sherry wine; then add the fluid extract hops and alcohol, containing the spirit orange, and lastly enough sherry wine to make 1 pint; filter and wash with sherry wine until 1 pint is obtained. Each fluid ounce of this preparation represents substantially 40 grains of saccharated pepsin and 30 grains of hops.

266. Wine Iodine.

Dissolve 1 part iodine in 1000 parts of any wine free from tannin.

267. Wine of Iron Bitters.

Sherry wine..... 20 ounces.
 Ammonio-citrate iron... 512 grains.
 Quinine 10 grains.
 Sulphate cinchonla..... 5 grains.
 Citric acid..... 1 dram.
 Tincture of fresh orange
 peel 2 ounces.
 Simple syrup..... 8 ounces.
 Alcohol 2 ounces.
 Oil cinnamon..... 4 drops.
 Oil caraway..... 4 drops.

268. Wine Iron, Sweet.

Tartrate iron and potas-
 sium 3 drams.
 Water of ammonia..... 1 dram.
 Sweet Malaga wine..... 1 pint.
 Dissolve by trituration.

269. Wine Kola Tonic.

Fluid extract of kola..... 3 parts.
 Syrup of orange peel..... 8 parts.
 Tincture of nux vomica... 1 part.
 Malaga wine to..... 100 parts.

Mix, set aside for three weeks, and decant the clear wine.

270. Wine Lupulin.

Tincture lupulin..... 10.0
 Spanish wine..... 90.0

271. Wine Mitchella.

Fluid extract of squaw
 vine 4 ounces.
 Alcohol $1\frac{1}{2}$ ounces.
 Water $1\frac{1}{2}$ ounces.
 Stronger white wine, q. s.
 to make..... 1 pint.

Mix. Allow to stand 24 hours and filter.

**272. Wine Mitchella Com-
pound.**

Fluid extract of squaw
 vine 4 ounces.
 Fluid extract of unicorn
 root 1 ounce.
 Fluid extract of cramp
 bark 1 ounce.
 Fluid extract of blue co-
 hosh 1 ounce.
 Compound wine of orange
 (N. F.) q. s. to..... 1 pint.

Mix. Allow to stand 24 hours and filter.

273. Wine Orange

Citric acid..... 450 grains.
 Carbonate of potash..... 50 grains.
 Honey to taste, say..... 3 ounces.
 Infusion of orange peel (B.
 P.).... 5 ounces.
 Alcohol..... $1\frac{1}{2}$ ounces.
 Essence of cloves..... 3 drops.
 Water, sufficient quantity.. 1 quart.

274. Wine Quassia.

Extract quassia..... 1.0
 Dissolve in
 Spanish wine..... 90.0
 Tincture quassia..... 10.

275. Wine Quassia.

Rasped quassia..... $\frac{1}{2}$ ounce.
 Orange peel..... 2 drams.
 Wine $1\frac{1}{2}$ pints.
 Macerate for 24 hours, express and filter.

276. Wine Quinine (B. P.).

Sulphate of quinia, 20 grains;; citric acid, 30 grains; tincture orange, 20 ounces; dissolve the citric acid and then the sulphate of quinia in the wine; digest 3 days and filter. Dose: $\frac{1}{2}$ to 1 ounce.

277. Wine Quinine (Magendie).

Sulphate of quinine, 14 grains; sherry, 1 quart; agitate frequently for some time. "The sulphate of quinine requires to be dissolved in a little dilute sulphuric acid before it is added to the wine." Dose: 1 wine-glassful, as a tonic and stomachic.

278. Wine Quinine.

Sulphate of quinine..... 12 grains.
 Madeira wine..... 2 pints.
 Dissolve. Dose: 1 to 2 fluid ounces.

279. Wine Quinine, Improved.

Gelatin 15 grains.
 Distilled water $2\frac{1}{2}$ drams.
 Dissolve and add to:
 Sherry wine $29\frac{1}{2}$ ounces.
 Shake and set aside to clear; then add the following solution:
 Hydrochlorate of quinine... 30 grains.
 Dilute hydrochloric acid... 30 drops.
 Water $\frac{1}{2}$ ounce.
 After a week, filter.

280. Wine Rhubarb.

Rhubarb, in coarse powder, 1½; canella bark, ½; sherry, 20; macerate 7 days, filter, and make up to 20. Dose, 1 to 2 drams.

281. Wine Rhubarb.

Rhubarb, in coarse powder, 5 ounces; canella, in coarse powder, 2 drams; proof spirit, 5 fluid ounces; sherry, 1¼ pints; macerate for 7 days, press and filter.

282. Wine Rhubarb.

Rhubarb, 3 ounces; canella, 2 drams; sherry, 1 quart; macerate 14 days. Weaker than the last. Dose: As a stomachic, 1 to 3 fluid drams; as a purgative, ½ to 1 fluid ounce, or more. It does not keep well.

283. Wine Sarsaparilla

Alcoholic extract of sarsaparilla, 1 ounce; white wine, 16 ounces.

284. Wine Sarsaparilla Compound.

Fluid extract sarsaparilla. 128 minims.

Fluid extract china root.. 32 minims.

Fluid extract gualac wood 128 minims.

Fluid extract licorice root 128 minims.

Fluid extract sassafras... 96 minims.

Sherry wine, q. s..... 1 pint.

Mix, and after standing several days, filter and pass enough sherry wine through the paper to make one pint.

285. Wine Senna.

Alexandrian senna leaves 1½ ounces.

Sherry wine 27 ounces.

Macerate for 8 days, press and strain; then add 5 grains of gelatin dissolved in 2½ drams of distilled water, and then the following:

Tincture of orange peel.. 1 ounce.

Tincture of ginger ½ ounce.

Aromatic tincture 80 minims.

Honey 2 ounces.

Again allow to stand for 10 days, and filter.

286. Wine Senna.

Senna, 4 ounces; coriander seed, 2 drams; fennel seed, 2 drams; sherry, 2½ pounds; digest for 3 days, add stoned raisins, 3½ ounces. Macerate for 24 hours, and strain with expression.

287. Wine Squills, Bitter.

Pale Peruvian bark, 6 ounces; Winter's bark, 6 ounces; lemon peel, 6 ounces; swallowwort, 1½ ounces; angelica root, 1½ ounces; squill, 1½ ounces; wormwood, 3 ounces; balm, 3 ounces; juniper berries, 1½ ounces; mace, 1½ ounces; white wine, 2½ gallons; proof spirit, 1 pint. Macerate for 10 days.

288. Wine Squills, Compound.

Dried squill, 1 ounce; orange peel, 3 drams; juniper berries, 3 drams; white wine, 2½ pints. Digest for 3 days, filter, and add 2 ounces of oxymel of squills.

289. Wine Tar.

Tar 2 ounces.

Water 4 ounces.

Pumice powder 3 ounces.

Alcohol 1 ounce.

Glycerine 1 ounce.

Stronger white

wine to make 16 fl. ounces.

Wash the tar with the water and throw the water solution away; then add the pumice powder to the tar, mix thoroughly; then add the alcohol and glycerine, again mix, and after two hours add the stronger white wine (14 ounces). Shake the mixture frequently during 24 hours, then pour on a wetted filter and obtain of the filtrate 16 fluid ounces.

290. Wine Tar.

Tar 6 troy ounces.

Carbonate

of magnesia 2 troy ounces.

Sherry wine

enough to make 4 pints.

Rub the magnesia and tar together, gradually add the sherry wine, triturating well; set aside for 24 hours, then filter to make 4 pints.

291. Wine Tar.

Oil tar 6 fl. drams.

Carbonate magnesium.. 1 ounce.

Sugar 3 ounces.

Alcohol 6 fl. ounces.

Syrup 3 ounces.

Sherry wine

sufficient to make..... 2½ pints.

Rub the oil of tar with the magnesia and sugar to a smooth powder; then having mixed the alcohol, wine and water together, rub the tar and magnesia with the mixed liquids gradually added; shake them well and filter; finally add the syrup.

292. Wine of Tar.

Rub 4 troy ounces of tar, 5 troy ounces of granulated sugar, and 8 troy ounces of washed and dried sand, first by themselves and then with 1½ pints California sherry and sufficient water to make 2 pints. Transfer the mixture to a bottle, agitate occasionally for 4 or 5 days, and filter with paper pulp. A fine, clear wine, highly impregnated with tar, and which will keep without undergoing acetous fermentation, is thus obtained.

293. Wine of White Ash.

Take of the inner bark of white ash (*Fraxinus Americana*), in powder, No. 40, 8 fluid ounces; sherry wine sufficient for 2 pints. Macerate the bark for three days, pack firmly in a cylindrical percolator, and displace slowly 2 pints. The wine has the color of brown sherry and a taste quite peculiar. The usual dose is a teaspoonful three times a day.

TINCTURES.

294. Tincture Absinthe.

Oil of wormwood..... 2 fl. drams.
 Oil of badian seed..... 1½ fl. drams.
 Oil of anise seed, .
 Oil of fennel, .
 Oil of coriander seed,
 of each..... 1¼ drams.
 Oil of Crete marjoram
 (origan),
 Oil of angelica, each... ¾ fl. dram.
 Oil of cardamom..... 20 drops.
 Rectified spirits, 90
 per cent to..... 2 gallons.
 Dilute the solution with 2½ quarts of
 water and color it green.

295. Tincture Acid Tannic.

Tannic acid..... 30.
 Dissolve in
 Distilled water..... 200.
 Alcohol 100.
 Then add
 Fresh orange peel..... 2.0
 Macerate 2 days and filter.

296. Tincture Astringent.

Tannic acid..... 30.
 Dissolve in
 Alcohol 50.
 Tincture benzoin..... 2.5
 Cologne 17.5
 For toilet use.

297. Tincture Benzoin Soluble.

Mix 3 fluid ounces of alcohol with 8 ounces of glycerine; dissolve in this liquid upon a water bath 1½ ounces of benzoin; add 6 fluid ounces of water and set aside until cold; decant from the precipitated resin the milky liquid; triturate this with 120 grains of magnesium carbonate, filter, and pass through the filter sufficient of a mixture of one volume of alcohol and two of water to make the whole filtrate measure 16 fluid ounces. It forms a yellow or light brown liquid of an agreeable odor.

298. Tincture Cajuput Compound.

Oil of peppermint, oil of cloves, oil of anise, oil of cajuput, of each 1 fluid ounce, alcohol 4 fluid ounces; mix. It is a powerful stimulant.

299. Tincture Cajuput Compound (Life Drops).

Oil of peppermint..... 1 ounce.
 Oil of cloves..... 1 ounce.
 Oil of cajuput..... 1 ounce.
 Oil of anise..... 1 dram.
 Alcohol, enough to make.... 2 pints.

300. Tincture Calamus Compound.

Contused calamus..... 1 ounce.
 Contused ginger..... 1 ounce.
 Contused coriander..... 1 ounce.
 Black pepper 1 ounce.
 Alcohol 2½ pints.
 Macerate for 4 days, and filter.

301. Tincture Carminative.

Cardamom seeds,
 bruised 600 grains.
 Stronger tincture of
 ginger 1¼ fl. ounces.
 Oil of cinnamon..... 100 minims.
 Oil of caraway..... 100 minims.
 Oil of clove..... 100 minims.
 Rectified spirit to make. 1 pint (Imp.)
 Macerate the cardamoms in 15 fluid ounces of the spirit one week, decant, express, and dissolve the oils in the mixed tinctures, making up to one pint with rectified spirit.

302. Tincture Catechu.

Three ounces of catechu in small pieces are digested in 1 pint of water at a temperature of about 100 degrees F., until reduced to a thin, creamlike consistence; the mixture is then allowed to cool; 1 pint of alcohol is added, allowed to stand 12 hours, and filtered; with the filtrate, the cinnamon, previously mixed with an equal bulk of sand, is percolated, the percolation being concluded by the aid of diluted alcohol to 2 pints.

303. Tincture Dewberry Compound.

Dewberry root..... 4 ounces.
 Aleppo galls, powdered.... ½ ounce.
 Cinnamon 3 drams.
 Capsicum 10 grains.
 Cloves 1 dram.
 Gum kino..... ½ ounce.
 Tincture of opium..... 1 ounce.
 Essence peppermint..... 1 ounce.
 Brandy 2 pints.
 White sugar..... 1 pound.

Digest for 24 days, filter and add the sugar, essence of opium and essence of peppermint.

304. Tincture Ferric Formate.

One hundred and fifty grams ferric chloride solution are diluted with 600 grams distilled water; 100 grams of water of ammonia are diluted with 600 grams distilled water. These solutions, chilled by surrounding ice, are allowed to run in thin

streams into a vessel containing 3 liters of boiled distilled water; the precipitate is washed by decantation until free from chlorides, then collected upon a filter, allowed to drain, expressed, transferred to a vessel containing 100 grams formic acid (sp. gr. 1.18) and dissolved by stirring. The solution is diluted with distilled water to 500 grams, and 500 grams alcohol added; after standing, the clear liquid is decanted; this contains 3 per cent of ferric formate. If this preparation be made at ordinary temperatures the ferric hydrate does not dissolve completely, and the finished preparation has a tendency to precipitate a basic salt.

305. Tincture Ferric Formate.

Seventy-five grams formic acid (sp. gr. 1.18) are neutralized with 35 grams precipitated calcium carbonate, the calcium formate being held in solution by warming to 30 degrees C.; 140 grams ferric sulphate solution are mixed with 300 grams distilled water and 25 grams formic acid; add to this solution that of the calcium formate, stirring constantly; and, lastly, 500 grams alcohol; allow to stand 5-6 hours, filter and wash the precipitate with dilute alcohol until the filtrate measures one liter. The tincture also contains 3 per cent ferric formate.

306. Tincture Guaiac Ethereal.

Gum guaiac..... 6 ounces.
Spirits nitre, concentrated. 1 quart.
Dissolve by agitation, filter.

307. Tincture Hyoscyamus Acid.

Hyoscyamus leaves..... 10.
Reduce to a powder and add
Diluted alcohol..... 100.0
Concentrated sulphuric acid..... 0.5
Macerate 5 days, express and filter.

308. Tincture Iodine Chlorated.

Iodine, 20; chloral hydrate, 30; alcohol, 36 degrees (sp. gr. 958), 140 parts. The solution takes place without decomposition and the preparation is miscible with water without precipitating. It is of a pure golden hue, has the odor and taste of its ingredients, coagulates albumen readily, and is an excellent hemostatic.

309. Tincture Iodine Decolorized.

Dissolve 40 grams (1 ounce, 130 grains) iodine in 390 cubic centimeters (13 fl. ounces) alcohol. Add 90 cubic centimeters (3 fl. ounces) stronger water of ammonia and let the mixture stand in the light for 4 weeks.

Care should be taken not to disturb the bottle so long as it contains any sediment, as iodide of nitrogen is liable to be formed, which is a very explosive compound even when wet.

310. Tincture of Iodine, Deodorized.

Iodine 1 troy ounce
Sodium sulphite.
Ammonium carbonate.
Alcohol of each sufficient.
Water 2 fl. ounces.

Upon 1 troy ounce of sodium sulphite, and 200 grains of ammonium carbonate, each previously powdered, pour the water, and then gradually add the iodine until its color is no longer discharged. If now the effervescence has ceased, add ammonium carbonate in proportion to the remaining iodine; but if ammonium carbonate still predominates, then add sodium sulphite in proportion to the surplus of iodine, and continue the incorporation of the iodine until all has been added, and a faintly yellow solution results, whilst some sulphite and carbonate remain in excess. Now gradually add alcohol with constant stirring until the mixture measures 12 fluid ounces. Pour this upon a muslin strainer, press the liquid out, and measure it. Mix the solid residue with enough alcohol to make the measure of a pint when united with the first expression, then press the liquid out, mix it with that first obtained, and filter the tincture through paper.

311. Tincture Iodoform Compound.

Dissolve iodoform, 8 grams, balsam of Peru, 3 grams, in alcohol, 20 grams, and add potassium iodide, 70 grams, glycerine and water, each, 35 grams.

312. Tincture Iodoform Compound.

Iodoform 15 grains.
Iodide of potassium..... 2 drams.
Glycerine 2 drams.
Stronger alcohol..... 6 drams.

Rub the iodide of potassium and iodoform to a fine powder, add the glycerine, rub to the consistence of cream, then add the alcohol, and stir briskly until complete solution is effected.

313. Tincture Iron.

Iron, in fine powder..... 1300 grains.
Hydrochloric acid, sp.
gr. 1.16..... 17½ troy ounces
Potassium chlorate, in
powder..... 475 grains.
Alcohol..... 32 fl. ounces.
Water, a sufficiency.

Dilute the acid with the water to the measure of 2 pints; then gradually add the iron in small quantities at a time. When complete solution is effected, add the potassium chlorate; stir until dissolved; let stand a few minutes and then mix the alcohol with the solution while yet warm, and filter.

314. Tincture Iron Aromatic.

Soluble saccharated oxide of
 Iron 320 parts.
 Glycerine 100 parts.
 Simple syrup..... 200 parts.
 Distilled water..... 950 parts.

Mix the glycerine, simple syrup and water, and with the aid of heat dissolve the iron in the mixture, and strain the solution. When cold add

Raspberry water (quintuple)..... 40 parts.
 Orange flower water..... 40 parts.
 Bitter-almond water..... 5 parts.
 Cinnamon water..... 5 parts.
 Alcohol, 90 degrees..... 330 parts.
 Water, sufficient to make the whole..... 2000 parts.

The resultant tincture contains 5 per cent of iron, has a pleasant taste, and remains clear for a long time.

315. Tincture of Jalap Compound

The following formula is that used in conjunction with pelletierine.

Fluid extract jalap..... 2 ounces.
 Fluid extract mandrake.... 2 drams.
 Fluid extract senna..... 1 ounce.
 Diluted alcohol enough to make 8 ounces.

316. Tincture Kino.

Powder one and a half troy ounces of kino and half a troy ounce of catechu, mix them, add 10 fluid ounces water, heat for 10 or 15 minutes with constant stirring, and let the mixture cool, add water to make the mixture measure 12 fluid ounces and then add 4 fluid ounces alcohol. Pour the mixture into a bottle containing 60 grains of filter paper, shake well at intervals, and strain the tincture after 24 hours.

317. Tincture Lobelia Acid.

Lobelia herb..... 2 troy ounces.
 Capsicum 2 drams.
 Vinegar 1 pint.

Heat the vinegar to the boiling point, and pour on the drugs in a stone bottle. Keep closely corked and steep for ten days.

318. Tincture Myrrh Compound.

Tincture myrrh..... 50.0
 Tincture catechu..... 30.0
 Balsam peru..... 1.0
 Spirit scurvy grass..... 20.0

319. Tincture Myrrh, Compound.

Gum myrrh 1 ounce.
 Gum kino 5 drams.
 Red saunders ½ ounce.
 Alcohol 2 pints.
 Powdered borax 2 ounces.
 Water 11 ounces.
 Oil of lemon 35 drops.
 Oil of peppermint 25 drops.

Oil of rose 10 drops.

Simple syrup 12 ounces.

Mix the oils, gums, red saunders, and alcohol.

320. Tincture Opium, Camphorated Extemporaneous.

Tincture of opium... 1½ fl. ozs. 8 min.
 Benzoic acid 60 grains.
 Camphor 40 grains.
 Oil of anise 1 fl. dram.
 Honey 2 ounces.
 Diluted alcohol 31½ fl. ounces.

Mix and filter.

321. Tincture Opium, Camphorated.

Pulverized opium 1 dram.
 Gum camphor 2 scruples.
 Benzoic acid 1 dram.
 Oil of anise 1 fl. dram.
 Clarified honey 2 ounces.
 Hot water 1 pint.
 Alcohol 1 pint.

Dissolve the camphor and oil of anise in the alcohol. Triturate the opium with some of the hot water in a mortar for a few minutes, filter, and pass the remaining hot water through the filter over the dregs. Mix the alcoholic solution and the filtrate and finally dissolve in it the honey and benzoic acid.

322. Tincture Opium, Deodorized.

Macerate 1 part of the dried and powdered drug in 2 parts of water, at about 138 degrees F., 12 hours or over night, in a moderately warm place (80 to 90 degrees F.), in a partially closed flask. Pour the mass into a wetted double filter; when the liquid ceases to pass, rinse the flask with 1 part more of water at 138 degrees F., and pass this through the residue. Repeat this once or twice, so as to obtain 4 or 5 parts of moderately concentrated solution; the residue will be thus practically exhausted. Cool the liquid to 32 degrees F., and filter, surrounding the filter with ice. If necessary re-filter the first portion until it passes bright. Finally, wash the filter with sufficient ice water to make up the filtrate to 8 parts, and add alcohol 2 parts. A permanent, bright, clear tincture results, which is practically free from narcotine, and thoroughly deodorized.

323. Tincture Orris Root.

Orris root, ground 2 pounds.
 Alcohol 8½ pints.

Obtain by percolation and displacement 1 gallon.

324. Tincture Pellitory Compound.

Pellitory 4 drams.
 Camphor 3 drams.
 Opium 1 dram.
 Oil of cloves 2 drams.
 Alcohol 6 fl. ounces.

Macerate for 8 days, and filter.

325. Tincture Phosphorus.

Phosphorus 32 grains.
 Absolute alcohol 46 ounces.
 Tincture vanilla 1 ounce.
 Oil orange peel 3 drams.
 Absolute alcohol enough to
 make 48 ounces.

The phosphorus is digested with the absolute alcohol, with the exclusion of air, till dissolved; then the flavoring ingredients are added, and finally the bulk is made up with absolute alcohol to 48 fluid ounces. Twelve fluid drams contain one grain of phosphorus.

326. Tincture Poke-berries, Concentrated.

Macerate 16 ounces of dried poke berries in 2 pints of alcohol for 14 days at a temperature of 90 degrees F.; express and filter.

327. Tincture Pokeroot Compound.

Macerate ground poke root, 6 ounces, and powdered cardamom, 2 ounces, in 2 pints of diluted alcohol for 14 days, and filter.

328. Tincture Quassia Compound.

Bruised cardamom..... ½ ounce.
 Bruised cochineal..... ½ ounce.
 Powdered cinnamon..... 6 drams.
 Chipped quassia..... 6 drams.
 Raisins 7 ounces.
 Diluted alcohol..... 2 pints (imp.)
 Digest for 7 days, strain, express residue, and filter.

329. Tincture Quassia and Cinchona.

Cinchona, in coarse powder ½ ounce.
 Quassia, in coarse powder. ½ ounce.
 Colombo, in coarse powder ½ ounce.
 Gentian, in coarse powder. ½ ounce.
 Serpentaria, in coarse powder ½ ounce.
 Chamomile, in coarse powder ½ ounce.
 French brandy..... 2 pints.

Macerate 14 days, and extract by displacement.

330. Tincture Quinine Compound.

Sulphate of quinine..... 80 grains.
 Tincture of orange peel 10 fl. ounces.
 Dissolve. A fluid dram contains 1 grain of the sulphate.

331. Tincture Quinine Compound.

Sulphate of quinia..... 48 grains.
 Compound tincture of
 orange peel..... 5½ fl. ounces.
 Elixir of vitriol..... 45 drops.

332. Tincture Quinine, Ammoniated.

Sulphate quinine... 160 grains.
 Solution ammonia. 2½ fl. ounces.
 Rectified spirit..... 12¾ drams.
 Water, to..... 20 fl. ounces.

Rub the quinine in a glass mortar to fine powder, add the rectified spirit and

stir; now add the solution of ammonia, then the water in such quantities that any turbidity caused by each portion disappears before adding more; filter.

333. Tincture Quinine and Ammonia.

Sulphate of quinine... 32 grains.
 Alcohol, 49 per cent... 3½ fl. ounces.
 Spirit of ammonia..... ½ ounce.

334. Tincture Quinine and Ammonia.

Quinine (alkaloid)..... 32 grains.
 Aromatic spirit of ammonia.... 4 fl. ounces.

335. Tincture Red Coloring.

Alkanet root..... 4 ounces.
 Alcohol, 95 per cent..... 16 ounces.

Digest for 7 days, occasionally agitating. Pour off the clear liquid, express and strain through muslin.

336. Tincture Red Saunders.

Red saunders..... 3 ounces.
 Alcohol, quantity sufficient.

Pack evenly and firmly in a percolator. Pour on the alcohol until 16 ounces have passed through.

337. Tincture Rhubarb.

Rhubarb 25 grams.
 Cardamom 5 grams.
 Glycerine 25 cubic cent.
 Alcohol,

Water, each a sufficient quantity to
 make 250 cubic cent.

Mix the glycerine with 150 cubic centimeters of alcohol and 75 cubic centimeters of water. Mix the rhubarb and cardamom and reduce the mixture to a moderately coarse (No. 40) powder, moisten the powder with 25 cubic centimeters of the menstruum and macerate for 24 hours; then pack it firmly in a cylindrical glass percolator and gradually pour on the remainder of the menstruum. When the liquid has disappeared from the surface gradually pour upon it enough of a mixture of alcohol and water, using the same proportions as before, and continue the percolation until 250 cubic centimeters are obtained.

Glycerine seems to be needed, as it prevents precipitation and makes the tincture more permanent.

338. Tincture Rhubarb Compound.

Rhubarb 4 ounces.
 Bitter root..... 2 ounces.
 Golden seal..... 2 ounces.
 Gentian 2 ounces.
 Prickly ash berries..... 2 ounces.
 Sassafras 1 ounce.
 Cardamom seeds..... 1 ounce.

Reduce the ingredients to a fine powder, pack properly into a percolator and pour on diluted alcohol until 80 fluid ounces of tincture have been obtained.

339 Tincture Rhubarb Compound.

Rhubarb	50.0
Gentian	12.5
Serpentaria	1.5
Dilute alcohol.....	600.0

Allow the mixture to stand for 5 days, then express and strain. After the sediment has subsided, filter. Make the filtrate to measure 500.0.

340. Tincture Saffron.

American saffron.....	2 ounces.
Alcohol	16 ounces.

Macerate for 7 days. Express and filter through paper.

341. Tincture Sanguinaria Compound.

Blood root	2 ounces.
Lobelia	2 ounces.
Skunk cabbage	2 ounces.
Distilled vinegar	2 pints
Alcohol	2 fl. ounces.

Make 2 pints of mixture by percolation.

342. Tincture Senna (Compound).

Senna, broken small, 5; raisins, freed from seeds, 4; caraway, bruised, 1; coriander, bruised, 1; proof spirit, 40; macerate the ingredients 48 hours in three-fourths of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit; press, filter, and make up 40.

343. Tincture Senna (Compound).

Senna, 3½ ounces; caraway seeds, bruised, 1 dram; stoned raisins, 5 ounces; proof spirit, 1 quart; macerate for 7 days, press and filter.

344. Tincture Senna (Compound).

Senna and stoned raisins, of each 4 ounces; sugar, 2½ ounces; coriander, 1 ounce; jalap, 6 drams; caraways and cardamoms, of each 5 drams; proof spirit, 1 quart; digest, or proceed by percolation.

345. Tincture Soap With Turpentine.

White soap, 3 ounces; oil of turpentine, 3 ounces; spirit of wild thyme, 2 pounds; white of ammonia, 2 ounces.

346. Tincture Spice.

Pimento	4 ounces.
Cloves	1 ounce.
Nutmeg	½ ounce.
Alcohol	24 fl. ounces.
Water	8 fl. ounces.

Mix the two latter, grind the spices freshly, and percolate.

347. Tincture Stillingia.

Stillingia root (fresh).....	8 ounces.
Diluted alcohol	2 pints.
Nitric acid	½ fl. ounce.

Macerate 14 days, express and filter. The addition of the nitric acid is stated to be

of great value in tinctures made by maceration, since it forms soluble nitrates.

348. Tincture Sweet (Gold Tropfen) (Essentia Duleis).

Solution potassium acetate.....	30.0
Spirit acetic ether.....	20.0
Spirit chloric ether.....	60.0
Tincture caramel.....	25.0
Syrup	75.0
Alcohol	400.0

Mix and filter.

349. Tincture Tolu Compound.

Tincture of tolu.....	2 fl. drams.
Camphorated tincture of opium	4 fl. drams.
Mucilage	6 fl. drams.
Aniseed water, sufficient quantity for.....	6 oz. emulsion.

350. Tincture Tolu Compound.

Balsam of tolu.....	2 ounces.
Balsam of Peru.....	1 ounce.
Benzoic acid.....	½ ounce.
Saffron	½ ounce.
Alcohol	24 fl. ounces.

Digest for three days and filter.

351. Tincture Wild Cherry.

Wild cherry bark in No. 20 powder.....	4 ounces.
Distilled water	7½ fl. ounces.

Macerate 24 hours in a closed vessel and add:

Rectified spirit	12½ fl. ounces.
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Macerate 7 days, then press, filter, and add proof spirit to make 1 imperial pint.

352. Tincture Wormwood, Alkaline.

Wormwood	8 parts.
Tansy	8 parts.
Centaury	8 parts.
Bog bean	8 parts.
Alcohol	120 parts.
Carbonate of potassium....	1 part.

Digest for 6 days, and filter. Dose, 1 or 2 fluid drams.

PILLS.

353. Pill Excipient.

Powdered althaea.....	1 dram.
Powdered tragacanth.....	10 grains.
Simple syrup.....	2 fl. drams.

Two grains of this excipient will make a good mass with 20 grains sulphate of quinia, 20 grains sulphate cinchonidia, or 30 grains powdered asafœtida; 3 grains with 30 grains dried sulphate iron, 50 grains calomel, 50 grains subnitrate of bismuth, or 10 grains powdered digitalis; 4 grains with 30 grains Quevenne's iron; 5 grains with 45 grains pyrophosphate of iron, or 45 grains powdered capsicum.

354. Pill Excipient.

Sugar, tragacanth, acacla, white castile soap, in fine powder, each 1 part; glycerine 16 parts; heat to make a homogeneous paste.

355. Pill Excipient.

Canada balsam mixed in the proportion of 3 parts to 1 of wax prevents the pills from becoming hard and insoluble, and has also the advantage of being well adapted for deliquescent substances, like acetate of potassium, which are well preserved thereby for an indefinite period.

356. Pill Excipient.

Resin soap produced by heating together to the boiling point 100 parts of resin, 30 parts of carbonate of potash, and 300 parts of water. When effervescence ceases the product is finished, though the heat may be continued until any desired consistency is obtained. It may be used as an excipient for a great many drugs, though not with metallic salts, because of liability to double decomposition. It works well with mercury, and mixes freely with camphor, naphthol, tar, bisulphide of carbon, etc.

357. Pill Excipient.

Rub one dram of powdered tragacanth in a mortar with two drams of alcohol, then add quickly two ounces of treacle, previously made more fluid by warming, and thoroughly mix. The composition soon sets into an adhesive mass. The only advantage this can have over the glycerite of tragacanth is that it is perhaps less hygroscopic. A good glucose syrup could be advantageously substituted for the treacle.

358. Pill Excipient.

Powdered slippery elm..... 2 drams.
Flour 1 dram.
Glycerine 2 drams.
Water 4 drams.

Boil until a thick paste is obtained; be careful not to burn it.

359. Pill Excipient.

It keeps and makes a firm, easily manipulated mass. Pills made with it readily disintegrate, even when long kept. Consistence semi-solid, most conveniently used from a pound blue mass jar, with a wooden spatula of insufficient length to prevent closing, with top, which is kept on the jar:

Powdered tragacanth..... 2 drams.
Powdered acacla..... 2 drams.
Glycerine 1 fl. ounce.
Syrup 4 fl. ounces.

Rub the gum with the glycerine and the syrup in a mortar.

360. Pill Excipient.

Powdered gum arabic..... 8 parts.
Glycerine 10 parts.

Mix in a mortar and heat on water bath till clear.

361. Pill Excipient.

Use 3 drops of lactic acid to 16 grains of quinine sulphate. This makes an excellent pill mass, and the excipient is equally suitable when other ingredients than quinine form part of the pill mass.

362. Pill Coating, Gelatin.

Gelatin 1 ounce.
Glycerine ½ ounce.
Water 8 ounces.

Dissolve the gelatin by means of a water bath, and when ready remove the apparatus a little distance from the heat. The pills are stuck on the ends of needles, dipped in this solution and rotated several times in the fingers, and finally stuck in putty to dry.

363. Pill Coating, Gelatin.

Best French gelatine..... 1 ounce.
Water 4 ounces.
Dissolve; then add
Acid salicylic..... 10 grains.

364. Pill Coating, Gelatin.

Gelatin (Cox's)..... 6 drams.
Acetic acid..... 1 fl. oz. 6 fl. drs.
Spirit of nitrous ether.. 1 fl. ounce.
Granulated gum arabic. 1 dram.
Oil of gaultheria..... 5 minims.

Dissolve the gelatin and the gum arabic in the acetic acid with the aid of a water bath, then add the other ingredients and mix. The mixture is kept in a well stoppered bottle and used as required. When it is desired to coat pills, the mass is rolled out as usual to near the required length; a piece of thread is then laid on the machine and rolled into the mass, which, when of the required length, is then rolled into pills on the pill machine, the pills remaining united by the thread. To introduce this thread, it may be necessary to make a longitudinal slit into the roll before the final shaping into pills. The string of pills is then introduced into the gelatin mixture, removed, twirled by the end of the thread so as to throw off excess of coating, hung up by attaching the ends of the thread to pins, and exposed to a cool draught of air until dry. Finally, the pills are severed by cutting the end of the thread close to each pill, thus leaving a very small piece of the thread incorporated with each pill. The pills are slightly, readily soluble, etc. If it is desired to coat pills by the aid of the needle, as is customary, two drams more of gelatin are substituted for the gum in the above formula. Some practice is required to introduce the thread into the pill as above required.

365. Pill Coating.

Powdered tragacanth
comp. ½ dram.
Syrup 1 dram.
Water, to make..... 1½ ounces.

366. Pill Coating, Sugar.

Extemporaneous sugar-coating may be effected to a reasonable degree of perfection in the following manner: Mix together thoroughly equal quantities of sugar, gum and starch. Moisten the surface of the pills with an equal mixture of simple syrup and water, and then place them on the powder in a shallow dish, and give the same a centrifugal motion, so that they may be equally coated by the moisture of the syrup, which will agglutinate the particles of the powder. Dexterity attained by practice is necessary to success.

367. Pill Coating, Sugar.

A very simple method of coating pills with sugar is as follows: The dried pills, after being moistened with a little melted sugar in a saucer, are poured upon a smooth sheet of paper covered with a thin layer of powdered sugar, where they are rolled about by the perfectly clean hand until completely enveloped. The whole is then gently shaken upon a hair sieve to remove the excess of powder, after which the pills are dried without the application of heat, which would cause their surface to crack. A single coating is quite sufficient in most cases, but the process may be repeated once or twice after the first drying. Pills coated in this way are not so beautifully smooth and glossy as those turned out by machinery, but they are very white and round, and after a little practice can be prepared off-hand, which is very convenient when only small quantities are required. They have also the advantage of being more soluble than when mixtures of starch, gum arabic, etc., are used.

368. Pill Coating, Elm Bark.

Coating with elm bark is accomplished by slightly moistening the well rounded, firm pills with a little dilute syrup, and rolling them in very finely powdered elm bark, drying, and repeating the operation once. In this way the pills are about the size of sugar coated pills, but have the advantage of being swallowed more easily.

369. Pill Coating, Cacao Butter.

A small quantity of cacao butter is melted in a very flat capsule, if possible one with entirely flat bottom, the pills are quickly rolled in it, then at once thrown into a sufficient quantity of powdered starch, and allowed to cool. They will be found coated with a completely isolating air-tight layer,

which protects the mass from all influences of air and moisture, and prevents evaporation of volatile ingredients. The coating keeps well, is almost tasteless and possesses to a certain degree the agreeable aroma of chocolate.

370. Pill Coating, Pearl.

The pills, being fairly hard and rounded, are to be shaken in a pot or chip pill box with sandarach and ether varnish, and then thrown into very finely powdered French chalk contained in another box. Rotate for a minute and then separate from the excess of powder with the aid of a sieve. Shake in another chip box with a mixture of equal parts of beaten and strained white of egg, syrup and water, sufficient to thoroughly wet the pills; then throw them again into an excess of the powder. Shake for another minute and then remove them to a marble slab, where they are to be lightly rotated under a pill finisher, sprinkling on a little more powder, if needed, until a smooth surface is produced. If time permits, they should be dried thoroughly by exposure in an open tray.

371. Pill Coating, Pearl.

A somewhat less ready method than No. 370 involves the use of a tinned copper globe about 5½ inches in diameter. Its halves are fastened together with pins, and two such globes are requisite—one for coating and one for finishing. Take 1 dram each of mucilage of acacia and simple syrup, and add sufficient water to make 1 ounce. Of this, pour enough upon the pills to dampen their surface thoroughly (just how much is only known from experience), and after rotating in the coater, in order to distribute the gum mixture thoroughly, add very finely powdered French chalk, and rotate again until the powdered chalk has all been taken up or the pills thoroughly coated. The pills are then transferred to a burnisher, which may be warmed, and slightly coated with white wax, in which case a third globe will be required for final polish.

372. Abernethy's Pills.

Blue mass 10 grains.
Powdered jalap 20 grains.
Syrup buckthorn, sufficient quantity.
Mix. Divide into 6 pills.

373. Abernethy's Pills.

Powdered Socotrine aloes.. 48 grains.
Powdered Ipecac 20 grains.
Extract henbane 48 grains.
Blue pill mass 24 grains.
Make a mass with water and form into 24 pills.

374. Pills Acid Carbolica.

Carbolic acid 1 part.
 Powdered elm bark..... 3 parts.
 Gum arabic 1 part.
 Tragacanth paste, a sufficiency.

They may be coated with tolu or silver leaf.

375. Pills Aconitia Duquesnel.

Aconitia (Duquesnel)..... 1 grain.
 Sugar of milk..... 50 grains.
 Powdered licorice..... 50 grains.
 Extract gentian, quantity sufficient.

Triturate the aconitine thoroughly with the sugar of milk, in a small mortar; gradually mix with it the powdered licorice root, taking great care that the mixture is rendered perfectly uniform. Then mix with it the extract and make 200 pills. Each pill contains 1-200 grain of aconitine.

376. Agaricin Pills.

The following combination has been found to lessen the laxative properties of agaricin: Agaricin, 0.5 gram; Dover's powder, 7.5 gram; powdered althaea, and powdered acacia, of each, 4 grams; to be made into 100 pills.

377. Pill Cascara Compound.

Extract cascara sagrada 2 grains.
 Aloin 1-5 grain.
 Strychnine 1-60 grain.
 Extract belladonna..... 1-8 grain.
 Ipecac 1-16 grain.

For 1 pill.

378. Pills Cathartic Vegetable.

Compound extract colocyath 36 grains.
 Podophyllum, resin..... 9 grains.
 Leptandrin resin..... 3 grains.
 Jalap 6 grains.
 Aloes 12 grains.
 Extract hyoscyamus..... 6 grains.
 Oil peppermint..... 5 minims.

379. Pills Colchicum.

Powdered jalap..... 12 grains.
 Aloes 12 grains.
 Calomel 12 grains.
 Extract colchicum root..... 12 grains.
 Extract nux vomica..... 3 grains.

Mix, and divide into 12 pills.

380. Pill Copaiba.

Copaiba, 10 parts; glycerine, 2 parts; mix and incorporate in the order named, powdered sugar, 10; magnesia, 10; powdered glycyrrhiza, 8.

381. Pills Corrosive Sublimate.

Pellets containing $4\frac{1}{2}$ grains each of mercuric chloride and sodium chloride for use in the ready preparation of antiseptic

solutions. One pellet dissolves in a pint of warm water in about 3 minutes and gives a solution of the approximate strength of 1 to 2000. Sodium chloride is used in preference to ammonium chloride, obviating the cloudiness often produced by the latter when hard water is employed.

382. Pills Creosote.

Creosote 10 parts.
 Glycerine 2 parts.
 Powdered licorice extract... 10 parts.
 Powdered licorice root..... 18 parts.

Mix, and divide to suit.

383. Pills Creosote.

First prepare an emulsion of creosote.
 Gelatine 5.50
 Distilled water..... 12.00
 Sugar 2.50

To be dissolved in hot water bath and Creosote 20.00

To be added, constantly stirring, until a grayish-white, soft elastic mass is formed, which should be preserved in wide-mouthed, glass-stoppered bottles. A portion of this mass, containing the desired quantity of creosote, can be easily made into pills with the addition of althaea or licorice powder. The mass should not be brought in contact with the iron. It contains 50 per cent. creosote.

384. Pills Creosote.

Mix 1 part of creosote with 2 parts of powdered licorice root (prepared from the unpeeled root), and let the mixture stand a few minutes. Then make a mass with water, using about 3 drops for every gram of creosote.

385. Pills Emmenagogue.

Galbanum,
 Soap,
 Extract rhubarb compound, of each
 equal parts.

Divide to suit.

386. Pills, Fowler's Solution.

One hundred and twenty drops of Fowler's solution evaporated to half its bulk and massed with 2 grams gum arabic, 14 grams white sugar, and 50 cgm. of tragacanth. After division, the pills are dried 24 hours.

387. Pills, Helm's Hydrogogue.

Gamboge,
 Powdered digitalis,
 Powdered squill,
 Sulphate of antimony,
 each 45 grains.

Extract dandelion..... q. s.

Divide into 125 pills.

388. Pills, Hyoseyamus, Camphor and Morphine.

Extract hyoseyamus..... 40 grains.
 Camphor* 24 grains.
 Morphine sulphate..... 6 grains.
 Mix, and divide into 24 pills.

389. Pills Iron Carbonate (Blaud).

Ferrous sulphate, exsiccated..... 11
 Potassium carbonate..... 15
 Sugar 2
 Althaea root..... 5
 Glycerine, sufficient quantity.
 Make a pill mass.

390. Pills Iron Carbonate (Blaud).

Ferrous sulphate, cryst..... 10.0
 Potassium carbonate..... 5.0
 Sugar 10.0
 Magnesia 0.5
 Althaea root..... 15.0
 Glycerine, sufficient quantity.
 Make a pill mass.

391. Pills Iron Iodide.

Iodine 80 grains.
 Reduced iron..... 40 grains.
 Water 25 minims,
 or sufficient.
 Honey 30 grains.
 Marshmallow in fine
 powder 120 grains.

Rub the iodine to a fine powder in a mortar, adding the water, then the honey, and afterward the reduced iron in portions, triturating until the reaction is finished. Add the marshmallow, and having formed a pill mass, divide into 96 pills. Coat with tolu.

392. Pills Iron Protochloride.

Three grains of anhydrous protochloride of iron, 1 grain of powdered licorice, 1 grain of extract of licorice, for one pill. The pill keeps well, this advantage counterbalancing its size.

393. Janeway's Pills.

Resin podophyllin..... 10 grains.
 Aloes 20 grains.
 Extract belladonna,
 Extract nux vomica, each 5 grains.
 Mix, and divide into 20 pills.

394. Pills, Cole's Laxative.

Compound extract colo-
 cynth 30 grains.
 Calomel 10 grains.
 Resin podophyllin..... 1 grain.
 Divide into 10 pills.

395. Pills' Crane's Laxative.

Blue mass 24 grains.
 Aloes 6 grains.
 Croton oil..... 1-drop.
 Mix, and divide into 12 pills.

396. Pills Lupulin Compound.

Lupulin 4.0
 Camphor 2.0
 Tragacanth 8.0
 Glycerine, quantity sufficient.
 Make into 100 pills.

397. May Appie Pills.

Resin of podophyllum..... $\frac{1}{4}$ grain.
 Alcoholic extract of hyoseya-
 mus..... 1 grain.
 (Or) Alcoholic extract of bella-
 donna..... $\frac{1}{8}$ grain.
 Powdered capsicum..... 1 grain.
 Powdered sugar of milk..... 1 grain.
 Powdered acacia..... $\frac{1}{4}$ grain.
 About $\frac{1}{3}$ grain of glycerine is added to
 keep the mass soft. Syrup is used as ex-
 cipient. The pills should never be coated.

398. Pills Myrrh Thompsonian.

Myrrh 1 tablespoonful.
 Gum arabic 1 teaspoonful.
 Sugar 1 teaspoonful.
 Make into pills.

399. Pills Neuralgia.

Quinine sulphate 120 grains.
 Morphine sulphate 3 grains.
 Strychnine 2 grains.
 Arsenious acid 3 grains.
 Extract aconite 30 grains.
 Mix. Divide into pills.

400. Pills Neuralgia.

Phosphate of iron 440 grains.
 Tragacanth powd..... 120 grains.
 Sulphate quinine 2 $\frac{1}{2}$ ounces.
 Extract henbane 2 ounces.
 Extract aloes soc..... $\frac{1}{2}$ ounce.
 Acetic extract colchicum.. $\frac{1}{2}$ ounce.
 Camphor 160 grains.
 Mix and make a mass. Divide into 3 $\frac{1}{2}$
 grain pills.

401. Pills Phosphorus.

Phosphorus 5 grains.
 Benzoated lard 250 grains.
 Phosphate of calcium..... 205 grains.
 Carbonate of calcium..... 20 grains.
 Melt the lard by means of a water-bath,
 transfer to a strong-stoppered and per-
 fectly dry glass bottle previously made
 warm; add the phosphorus; shake until
 dissolved; then pour the solution upon the
 powders, previously mixed and kept in a
 similarly stoppered bottle, kept warm by
 standing in hot water, shaking briskly
 until the mass is thoroughly uniform in
 consistence.

402. Pills Phosphorus.

Phosphorus 4 grains.
 Powdered mastich 30 grains.
 Paraffin wax 50 grains.
 Vaseline 66 grains.
 Kaolin 90 grains.

Melt the wax and vaselline together in a porcelain capsule by the heat of a water-bath; place them in a strong, glass-stoppered bottle, previously warmed by allowing it to stand in an oven or other warm place; add the phosphorus (care being taken that the mixture is not too hot, a temperature of 140 degrees F. being quite sufficient to fuse the phosphorus), and shake briskly until cold. When quite cold put carefully in a mortar with the kaolin and powdered mastich, previously well mixed until a uniform mass is obtained.

403. Pills Phosphorus.

Mix intimately 30 parts of red phosphorus with 1,500 parts of linseed reduced to an impalpable powder, and add sufficient fresh curd to make a mass. Divide into pills and dust with wheat flower. Keep in tin boxes.

404. Pills Podophyllin (Castor Oil Pills).

Resin podophyllin 3 grains.
Extract of hyoscyamus 3 grains.
Soap 4½ grains.
Syrup 6 drops.
Make 12 pills.

405. Pills Potassium Permanganate.

Vaseline 1 part.
Paraffin 2 parts.
White wax..... 2 parts.
Fuller's earth..... 3 parts.

Melt the first three together, and add the "white bole" when the mixture is cold. Add to this the permanganate, previously powdered in a mortar, and roll out with a pill machine made with horn or wood.

406. Pills Potassium Permanganate.

Make into a soft paste 2 grams of kaolin with 30 to 40 drops of water, and incorporate with this mixture 1 gram of finely pulverized permanganate. The pill is to be rolled in talc.

407. Pills Quinine.

Ten parts quinine sulphate, 3 parts powdered sugar, 2 parts powdered acacia, 2 parts powdered tartaric acid, 3 parts powdered tragacanth, made into a mass with sufficient water; divided into the required number of pills, rolled out in starch powder, polished with talc.

408. Pills Rhubarb and Ox Gall.

Inspissated ox gall, ammoniac, powdered rhubarb. Equal parts.

Mix, and form pills of 2 grains each.

409. Pills Silver Nitrate.

Triturate dry nitrate of silver with powdered gum acacia, adding sufficient glucose to form a mass which, when finished, is perfect, of a beautiful cream white color, and of decided tenacity, and, moreover, the pills retain their shape and do not harden.

410. Pills Sulphur.

Potassium sulphide..... 1 dram.
Powdered jalap..... 1 dram.
Powdered soap..... 1 dram.
Extract dandelion..... q. s.
Make 120 pills.

411. Pills Tar and Iodoform.

Iodoform, 30 grams; vegetable tar, 15 grams; extract of opium, 0.6 grams; make 120 pills. The addition of 5 to 10 per cent of tar to iodoform, perfectly deodorizes the latter.

412. Pills Triplex.

Powdered scotrine aloes... 2 ounces.
Powdered scammony..... 1 ounce.
Blue pill mass..... 2 ounces.
Oil of caraway..... 3 drams.
Make a mass with syrup and make into pills of 5 grains each.

SOLUTIONS.

413. Solution Aluminium Chloride.

Sulphate of aluminium..... 25 parts.
Chloride of barium..... 25 parts.
Water, sufficient quantity.

Dissolve the two salts, each in 50 parts of warm water, mix the solutions, and heat the mixture on a water-bath to about 160 degrees F. Then allow to cool, filter, and pass enough water through the filter to make 100 parts of product.

414. Solution Ammonium Acetate.

In tradè formulæ it is best to define the quantity of that material which is of most reliable value, in this case the carbonate of ammonia.

Carbonate of ammonia..... 1 ounce.
Acetic acid, sufficient to neutralize it.
Water, sufficient to make 1 pint.

415. Solution Ammonium Acetate, Concentrated.

Now and then in prescriptions appears "liquor ammoniac acetatis concentratus."

Carbonate of ammonia..... 8 ounces.
Glacial acetic acid, q. s. to neutralize it.
Water, q. s. to make 1 pint.

416. Solution Ammonium Sulphide.

Place 1 part powdered ammonium chloride in a retort connected with a good condenser, add a solution consisting of 2 parts crystallized sodium sulphide and 5 parts boiling water, and distill off about one-half of the liquid in the retort. A very concentrated and trustworthy reagent is represented by this distillate.

417. Solution Ammonia Valerianate.

Distilled water.....	475 parts.
Valerianic acid.....	15 parts.
Alcoholic extract of valerian	10 parts.
Carbonate of ammonium q. s. to neutralize, about	15 to 20 parts.

The acid is mixed with 300 parts water, and the ammonium carbonate added at once in small pieces. When effervescence is no longer discernible, test with litmus paper, and if neutral, filter quickly through paper. Dissolve the extract of valerian in the remainder of the water, mix the two solutions, filter, and, if necessary, add distilled water to make 500 parts.

418. Solution Calcium Chlorophosphate.

Phosphate calcium precipitated	2 troy ounces.
Hydrochloric acid.	
Water of ammonia.	
Water.	

To the phosphate of calcium add a pint of water and enough hydrochloric acid to dissolve it; filter, add enough water of ammonia to precipitate the gelatinous phosphate; wash to remove the ammonium chloride, put the mass into a suitable vessel, with a little water, and 2 fluid ounces hydrochloric acid. When dissolved, make up to 24 fluid ounces and filter.

419. Solution, Fowler's (New Method).

The potassium carbonate is first dissolved in a small amount of water. The arsenic is added and dissolves almost instantly. Fifty parts of melissa water and 15 parts of dilute alcohol are added, and distilled water sufficient to bring the whole up to 100 parts. This makes a solution which is limpid, and remains so indefinitely, and never throws down any precipitate.

420. Solution Iron Albuminate.

Dried egg albumen.....	3 parts.
Cinnamon water	30 parts.
Solution of oxychloride of iron (Pharm. Ger.)..	12 parts.
Solution of soda (Pharm. Ger.)	0.75 parts.
Alcohol	12 parts.
Distilled water, enough to make.....	100 parts.

Dissolve the egg albumen in the cinnamon water, which contains about 10 per cent of alcohol. Dilute the iron solution with 40 parts of distilled water and add the alcohol. After several hours filter the liquid through a pellet of cotton, and then

pass enough water through the latter to make the product weigh 100 parts.

A more handsome product is obtained by reducing the dried egg albumen to 2.5 parts. Fresh egg albumen may, of course, be used. In this case, five times as much must be taken as of dry. With fresh albumen the solution is clearer.

421. Solution Iron Albuminate.

Thirty parts of dry albumen are dissolved in 1,000 parts of lukewarm water, strained, and poured into a mixture of 120 parts of solution of ferric chloride, and 1,000 parts of lukewarm water. It may be necessary to add very dilute soda solution to accurate neutralization in order to insure the precipitation of the ferric albuminate. The precipitate is washed by decantation with lukewarm water, collected on a moistened cloth, and when completely drained, transferred to a porcelain vessel, and dissolved by stirring in a mixture of 5 parts of soda solution and 50 parts of water. To this solution 250 parts of cinnamon water, 100 parts of alcohol and 50 parts of cognac are added, and then sufficient water to make 1,000 parts of fluid. So prepared, solution of albuminate of iron is a clear or only slightly turbid, red-brown fluid, having barely an alkaline reaction and a faint chalybeate taste, that of cinnamon being decided, and it contains 4 parts of iron in 1,000 parts. By chloride of sodium, as well as by hydrochloric acid, precipitates are produced. It is not rendered turbid by ammonia, nor does alcohol produce precipitation. When diluted with water (1-20) this solution is not blued by ferricyanide of potassium nor darkened by tannic acid.

422. Solution Iron Albuminate.

Dialyzed iron	12 fl. drams.
White of eggs.....	12 fl. drams.
Cinnamon water	30 drams.
Alcohol	30 drams.
Hydrochloric acid	15 drops.
Water q. s. ad.....	18 ounces.

The white of egg is diluted with the cinnamon water and filtered. The iron, previously diluted with 6 ounces of water containing the hydrochloric acid, is added to the filtered liquid, and the two are shaken together. Add the alcohol, and lastly add enough water to make 18 ounces.

423. Solution Iron Albuminate (Neutral).

Egg albumen, dry, 1 troy ounce; solution chloride of iron, 100 grains. Dissolve the egg albumen in a sufficient quantity of water, dilute the iron solution, mix the solutions, and add a saturated solution of sodium chloride containing 2 troy ounces of

the salt. Dissolve the well washed precipitate in a mixture of cinnamon water 3 troy ounces, pure glycerine 6 troy ounces, by aid of a sufficient quantity of caustic potassa to produce a clear and perfectly neutral solution, and add 1 drop of oil of cinnamon.

424. Solution Iron Albuminate Phosphorated.

The white of 1 egg (which should be as fresh as possible) is dissolved in 500 grams of distilled water, the solution mixed with 10 grams of ethereal tincture of chloride of iron, decolorized by light, and finally with 4 drops of a 1 per cent solution of phosphorus in ether. If the preparation is not needed immediately, it should be allowed to stand for 24 hours and then filtered.

425. Solution Iron Citrate.

An improved formula is:

Solution of tersulphate of iron	120 parts.
Ammonia water	100 parts.
Citric acid	25 parts.
Water, a sufficiency to make	100 parts.

Dilute the ammonia water with 300 parts of water, and the iron solution with 1,000 parts of water. Add the iron solution to the ammonia water. Wash the precipitated ferric hydrate, using 600 parts wash-water each time, pressing out the water from the hydrate, until the weight is reduced to less than 75 parts. Dissolve the citric acid in 40 parts of water, add 1 part of ammonia water, heat the liquid over a water bath between 55 and 60 degrees C. Add the ferric hydrate in portions, allowing each portion to dissolve before adding more. When the last portion of ferric hydrate has been added, continue heating the liquid for an hour at a temperature not exceeding 60 degrees C. Filter, and adjust the weight of the final product by the addition of water to 100 parts.

426. Solution Iron Iodide.

Sugar, 40 grams; iodine, 5 grams; iron reduced by hydrogen, 8 grams; distilled water, 40 grams; pure glycerine, 110 grams. Mix the iodine and sugar in a porcelain mortar, adding the iron by degrees. Heat gently in a capsule, stirring with a glass rod, and filter to separate the excess of iron; then add the glycerine. The mixture should weigh 150 grams. The syrup is made by adding 6 grams of this to 100 of syrup.

427. Solution Iron Malate.

Cranberry juice.....	14 fl. ounces.
Iron in the form of fine wire and perfectly clean	1 ounce.
Alcohol	2 fl. ounces.

The iron is added to the cranberry juice contained in a suitable vessel and set aside in a warm place, being occasionally agitated for several days. It is then 'billed' for a half to one hour, adding water from time to time to replace the amount evaporated. Filter and wash the filter with sufficient water to yield 14 fluid ounces of filtrate, add the alcohol and again filter if necessary. This yields a reddish liquid of a slightly acid, and not unpleasant, ferruginous taste.

428. Solution Iron Peptonated.

Dried egg albumen.....	1 part.
Pepsin, pure.....	0.05 part.
Solution of oxychloride of iron (Germ. Pharm.)....	12 parts.
Syrup	3 parts.
Brandy	10 parts.
Distilled water.....	100 parts.

Dissolve the egg albumen in 19 parts of distilled water, add the pepsin and digest during 4 hours at 40 degrees C. (104 degrees F.). On the other hand, mix the iron solution with the syrup and 55 parts of distilled water, mix this liquid with the solution of the peptonized albumen, and heat the whole in a steam-bath, to 90-96 degrees C. Then allow it to cool, add the brandy, and finally, enough water to make 100 parts. Let the mixture stand during eight days; then pour off the clear solution from the insignificant sediment.

429. Solution Iron Salicylate.

Sulphate of iron, pure.....	24 grains.
Sodium salicylate.....	30 grains.
Sodium acetate.....	210 grains.
Water	1 ounce.

Mix and dissolve.

430. Solution Iron Salicylate Braithwaite.

Sulphate of iron.....	20 grains.
Salicylate of sodium....	20 grains.
Glycerine	3 fl. drams.
Water, enough to make	3 fl. ounces.

Dissolve the sulphate of iron and salicylate of sodium, each, in $\frac{1}{2}$ of the water, and mix the solutions; then add the glycerine. The color of the mixture is darker than port wine, and the taste is not unpleasant.

431. Solution Magnesia Broude.

Diluted hydrobromic acid (U. S.).....	2 fl. ounces.
Carbonate of magnesium, sufficient quantity.	
Water, enough to make	7 fl. ounces.

432. Solution Magnesia Citrate.

Dissolve 170 grams of citric acid in 800 cubic centimeters boiling water; add 78 grams carbonate of magnesium in broken

pieces, and when dissolved, filter and wash the filter with enough hot distilled water to make 1000 cubic centimeters of filtrate. (The hot solution will not dissolve many of the salts of calcium, etc., sometimes found in carbonate of magnesia as impurities, hence these are filtered out.) Then add 480 cubic centimeters of syrup of citric acid, and enough water to make a total of 1500 cubic centimeters. Two hundred and fifty cubic centimeters of this solution are now placed in each of 6 magnesia bottles, and 80 cubic centimeters of water carefully flowed in on top of the first solution, so as not to mix. Now carefully flow into each bottle in the same manner a solution of 2 grams of bicarbonate of potassium in 28 cubic centimeters of distilled water. Cork tightly, tie and cap and store without shaking, until called for. Shake before dispensing.

By keeping a quantity of each solution on hand, pharmacists will be enabled to prepare single bottles of solution of citrate of magnesia at a moment's notice.

433. Solution Magnesia Citrate.

Acid citric 2 drams.
Magnesia calcined..... $1\frac{1}{2}$ drams.
Oil lemon..... 2 drops.
Syrup $1\frac{1}{2}$ ounces.
Soda bicarbonate..... 30 grains.
Water, to make..... 12 ounces.

Dissolve the acid in 8 ounces of water (warm preferred) and gradually add the magnesia. Strain and add the syrup, mixed with the oil of lemon, then water to 12 ounces, and lastly the bicarbonate of soda.

434. Solution Magnesia Citrate Improved.

Citric acid (in crystals)... 1 dram.
Sulphate of magnesia.... 1 ounce.
Simple syrup..... 3 fl. ounces.
Extract of lemon..... 10 drops.
Bicarbonate of potassium (crystals)..... 2 scruples.
Water, sufficient to make. 12 fl. ounces.

Place the acid and epsom salts together in a 12-ounce citrate of magnesia bottle and add the simple syrup and extract of lemon, agitate for a moment and add the water, and lastly the bicarbonate of potassium and cork immediately.

435. Solution Magnesia Citrate Extemporaneous.

Calcined magnesia..... 83 grains.
Powdered citric acid..... 437 grains.
Syrup citric acid..... $2\frac{1}{2}$ grains.
Distilled water, quantity sufficient.
Mix the acid and magnesia either in a

mortar or in the bottle and add 3 ounces water. Heat the water before using to about 150 degrees. Shake or stir for a few moments till solution takes place, then add syrup, and enough water to make 10 ounces. Next, add 40 grains potassium bicarbonate and cork securely. The cork down.

436. Solution Magnesia Citrate.

I.

Citric acid..... 9 ounces.
Carbonate magnesia,
powdered $27\frac{1}{2}$ drams.
Water 52 ounces.

Dissolve the citric acid in the water, add the powdered carbonate of magnesia and when effervescence has ceased filter and put in a bottle and label acid solution.

II.

Carbonate magnesia,
powdered $1\frac{1}{2}$ ounces.
Sugar 18 ounces.
Water 3 pints.

Dissolve the sugar in the water, add the powdered carbonate of magnesia and label alkaline solution.

III.

Acid solution,
Alkaline solution, of each.. 4 ounces.
Water 2 ounces.

Mix.

The result is a palatable, effervescent solution, clear and ready for use in ten minutes.

437. Solution Magnesium Citrate.

Magnesia (calcined)..... 59 grains.
Citric acid, powder..... 250 grains.
This is for an 8-ounce bottle.
Take of magnesia
(calcined) 88 grains.
Citric acid, powder..... 375 grains.

This is for a 12-ounce bottle.

Pour the oxide of magnesium and citric acid into a dry, clean 8 or 12-ounce bottle, as the case may be, and cork tightly with a good cork. When a bottle of magnesia solution is wanted, add 2 ounces of water, and shake to mix the ingredients; then loosen the cork, allowing the expansion of vapor to escape. The vapor is formed during the heat that is produced from the chemical solution. Cork well once more and shake forcibly, when immediately a clear solution will form; add the rest of the water to be used and also syrup of citric acid or lemon, lastly the bicarbonate of potassium; cork, shake and dispense.

438. Solution Magnesia Citrate (Fictitious).

Magnesium sulphate.... $\frac{1}{2}$ troy ounce.
 Citric acid..... 1 dram.
 Essence of lemon..... 5 minims.
 Syrup 3 fl. ounces.
 Water, quantity sufficient to make..... 12 fl. ounces.
 Potassium bicarbonate.. 40 grains.

439. Substitute for Magnesium Citrate.

Phosphate of sodium 1 ounce.
 Water 8 ounces.
 Syrup citric acid $\frac{1}{2}$ ounce.

440. Solution Quinine, Tasteless.

Quinine sulphate 1 part.
 Dilute sulphuric acid 1 part.
 Saturated solution of saccharin 20 parts.
 Essence of peppermint 10 parts.
 Distilled water 180 parts.

441. Solution Quinine and Ammonia (Bostiek).

Sulphate of quinine.... 32 grains.
 Alcohol, 49 per cent.... $3\frac{1}{2}$ fl. ounces.
 Ammonia water..... $\frac{1}{4}$ fl. ounce.

442. Solution Quinine and Ammonia (Squire).

Sulphate of quinine.... 32 grains.
 Stronger water .
 of ammonia 1 fl. dram.
 Alcohol, 49 per cent,
 sufficient to make.... 4 fl. ounces.

443. Solution Saccharin.

"Saccharin Liquor" is said to have been adopted by several of the Paris pharmacists. It is as follows: Saccharin, 6 grams; bicarb. of soda, 4 grams; alcohol, at 40 degrees, 100 grams; ol. menth., 20 drops. A teaspoonful represents 25 cgm. of saccharin, sufficient to sweeten a tumbler of water.

444. Solution Strontium Iodide.

Strontium iodide 20 parts.
 Distilled water 300 parts.

445. Solution Tar.

(Liquor Picis Carbonis.)

Prepared tar, 4 ounces; tincture of quillaia, 1 pint. Digest at a temperature of 120 degrees F. for a few days; allow to become cold, and decant or filter.

WATERS.**446. Waters Aromatic, To Preserve.**

Make a small opening 1-32 of an inch in the cork to admit atmospheric air. They will never become moldy or lose their aroma.

447. Essence for Anise Water.

Oil of anise..... 1 part.
 Alcohol (90 per cent by vol.) 9 parts.

448. Essence for Orange Water.

Oil of bitter orange..... 1 part.
 Alcohol (90 per cent)..... 20 parts.

449. Essence for Orange Flower Water.

Oil of orange flowers..... 1 part.
 Alcohol (90 per cent)..... 50 parts.

450. Essence for Camphor Water.

Camphor 4 parts.
 Alcohol (90 per cent)..... 6 parts.

451. Essence for Caraway Water.

Oil of caraway..... 1 part.
 Alcohol (90 per cent)..... 20 parts.

452. Essence for Lemon Water.

Oil of lemon..... 1 part.
 Alcohol (90 per cent)..... 9 parts.

453. Essence for Creosote Water.

Creosote 3 parts.
 Alcohol (90 per cent)..... 7 parts.

454. Essence for Lavender Water.

Oil of lavender..... 1 part.
 Alcohol (90 per cent)..... 9 parts.

455. Essence for Rosemary Water.

Oil of rosemary..... 1 part.
 Alcohol (90 per cent)..... 9 parts.

456. Essence for Cinnamon Water.

Oil of cinnamon..... 1 part.
 Alcohol 6 parts.

457. Essence for Peppermint Water.

Oil of peppermint..... 1 part.
 Alcohol 9 parts.

458. Essence for Spearmint Water.

Oil of spearmint..... 1 part.
 Alcohol 9 parts.

459. Essence for Rose Water.

Oil of rose..... 1 part.
 Alcohol 50 parts.

460. Water Cherry Laurel, Artificial.

Oil of bitter almonds..... 8 drops.
 Alcohol 4 drams.
 Distilled water..... 20 drams.

461. Water Chlorine.

Potassium chlorate..... 5 grains.
 Hydrochloric acid..... 30 minims.
 Water 8 ounces.

Place the powdered chlorate potassium in a dry 8-ounce vial, and pour in the acid, then let stand a few minutes, agitating occasionally, and pour in 2 ounces of the water and shake, then add 2 ounces more of the water, and shake again. Finally add the balance of the water, and preserve in a proper manner.

462. Water Lime.

Place slaked lime on a filter while still hot, and pass sufficient water through it. The product is sufficiently strong, but contains those impurities against which the official process aims to protect.

463. Water Orange Flower (Without Distilling).

Take 3 or 4 drops of a fine quality of oil of neroli petals and drop on a small piece of filter paper, say 3 inches square. Put the paper into a quart bottle, pour on 4 fluid ounces of warm distilled water at about 100 degrees F. and shake well for a couple of minutes. Then add warm distilled water up to a pint and shake the whole from time to time till cold. Lastly, filter. For flavoring purposes the addition of 2 drams of good distilled rose water to each pint of the above is said to improve it. As is said elsewhere in this department, waters of this nature should be prepared by distillation wherever possible.

464. Water Tar (Ger. Pharm.).

Tar 1 part.

Pumice stone, in fine powder 3 parts.

The pumice stone should be washed and dried and mixed with the tar. Then to make the tar water

Take of the above mixture.. 4 parts.

Water 10 parts.

Shake together five minutes, and filter. It should be freshly made when desired for use.

465. Water Tar, Substitute.

This preparation is largely used in Italy in place of tar water.

Green pine cones, 6 kilos; olibanum, 80 grams; tolu balsam, 50 grams; Burgundy pitch, 40 grams; juniper berries, 600 grams. The mixture is macerated over night in sufficient water. Afterwards 12 kilos of distillate are obtained by the aid of a slow fire. The liquid is filtered and bottled.

OINTMENTS.**466. Ointment Acre.**

Lard 5,000 parts.
 Venice turpentine 1,200 parts.
 Resin 600 parts.
 Yellow wax 300 parts.
 Powdered euphorbium 200 parts.
 Cantharidin 5 parts.

467. Ointment Boroglyceride.

Boroglyceride 30 parts.
 Glycerine 20 parts.
 White wax 10 parts.
 Petrolatum 60 parts.

Melt the boroglyceride with the glycerine, and add the wax, previously melted, with the petrolatum; stir until cold.

468. Ointment Caffeo-Iodoform.

Iodoform 30 grains.
 Coumarin 5 grains.
 Powdered coffee 30 grains.
 Lanoline 4 drams.
 Benzoinated lard 4 drams.

Mix. The coffee must be ground to as fine a powder as possible, along with the coumarin and iodoform, and be sifted through fine muslin.

469. Ointment Cantharidin.

Olive oil 4,000 parts.
 Yellow wax 2,000 parts.
 Cantharidin 5 parts.

470. Ointment Diachylon, Improved.

One part of freshly precipitated (from acetate of lead) pure white hydrated oxide of lead is rubbed with 2 parts of water and mixed well with 6 parts of the best Lucca olive oil. It should be stirred for about 2 hours over a hot water bath near the boiling point, and cooled with constant stirring until the proper consistency is obtained. While cooling, a dram of oil of lavender to the half pound of ointment is added. This ointment contains a definite quantity of oxide of lead, has a neutral reaction, can be kept in a good condition for some time, and constitutes a smooth, whitish, elegant preparation.

471. Ointment Diachylon, Hebra's Improved.

Dissolve 200 grams of acetate of lead in 1 liter of distilled water, and 300 grams white Castile soap in 1½ liter of warm distilled water. Filter both solutions and mix them. The precipitate is washed with water, then freed from moisture as much as possible by kneading, and 1 part of it is melted with 1½ parts of olive oil (best) on the water bath. The mixture is afterwards triturated in a mortar until it forms a fine, white salve.

472. Ointment Galls Compound.

Powdered galls 5
 Oil laurel 10
 Oil nutmeg 10
 Oil rosemary 25

473. Ointment Glycerine, Permanent.

Gelatin 1 gram.
 Glycerine 96 grams.
 Starch 144 grams.
 And a sufficient quantity of water.

474. Ointment Iodine Compound.

Iodine 15 grains.
 Potassium iodide 30 grains.
 Water 30 minims.
 Lard 480 grains.

475. Ointment Iodine Compound.

Iodide of potassium..... 1 ounce.
 Iodine ½ ounce.
 Water 1 ounce.
 Mix in a 2-ounce vial.

Forty-five minims of this solution to 1 ounce of lard makes the ointment.

476. Ointment Iodine Compound.

Iodide of potassium..... 24 grains.
 Iodine 12 grains.
 Lard 2 ounces.

477. Ointment Iodine Compound.

Iodide of potassium 2 drams.
 Iodine 18 grains.
 Lard 2 ounces.

478. Ointment Iodine Compound.

Iodide of potassium 2½ drams.
 Iodine 24 grains.
 Lard 2 ounces.

In scrofulous ulcers, etc.

479. Ointment Krameria Compound.

Burgundy pitch 8 parts.
 Venice turpentine 2 parts.
 White wax 1 part.
 Extract krameria 2 parts.
 Alum 1 part.

Melt the first three ingredients over a gentle fire, and add the krameria and alum in fine powder, and incorporate well.

480. Ointment Lanoline.

To be used as a cold cream.

Anhydrous lanoline 10 parts.
 Benzoated lard 20 parts.
 Rose water 30 parts.

481. Ointment Lanoline.

Imitation of Goulard's Cerate.

Anhydrous lanoline 10 parts.
 Benzoated lard 20 parts.
 Solution subac. of lead..... 30 parts.

482. Ointment Lanoline.

For burns.

Anhydrous lanoline 10 parts.
 Benzoated lard 20 parts.
 Lime water 30 parts.

483. Ointment Lanoline.

Refrigerant zinc ointment.

Anhydrous lanoline 10 parts.
 Benzoated zinc ointment ... 20 parts.
 Rose water 30 parts.

484. Ointment Compound Lead.

Lead plaster, 2 pounds; olive oil, 18 fluid ounces; mix by a gentle heat, and add of prepared chalk 6 ounces; lastly, add of dilute acetic acid 6 fluid ounces, and stir well until the mass has cooled.

485. Ointment Mercurial, Rapid Preparation.

Place 100 grams of mercury in a mortar, and mix with it a small quantity of lard, and add drop by drop 10 drops oxygenated water, stirring until complete extinction, and finally work in by fractions the balance of the lard up to 100 grams. (Oxygenated water is not peroxide of hydrogen, but simply water to which oxygen has been added under pressure.) The ointment, if well made, will answer all requirements, and prove very satisfactory.

486. Ointment Mercurial, Rapid.

Rub 6 pounds of mercury, 6 ounces of glycerine, 1 ounce water and 1 ounce gum arabic, in a mortar until the mercury globules have disappeared; then add the other ingredients as usual. The process requires about 2 hours.

487. Ointment Mercurial Preparation.

Mix 2 ounces of old mercurial ointment and 2 ounces of suet together. Add to the mixture 12 ounces of mercury in 3 separate portions, and triturate rapidly after each addition till the globules disappear, aiding the extinguishment of the mercury by adding during each trituration 15 drops of ether. Then add a melted and strained mixture of 4 ounces of suet and 6 ounces of lard, and triturate this mixture until cool.

488. Ointment Mercury.

Place the mercury in a porcelain mortar, warm to expel all moisture, and add for every 100 parts of mercury 1 part of metallic potassium in pieces. A gentle action results, and the mass should be stirred so that thorough amalgamation may take place. Then transfer to the dish containing the fats and stir briskly. In an instant the mercury is finely separated, while 10 minutes will suffice for complete incorporation. This extinction takes place as readily and as rapidly with large as with small quantities. The process is recommended for the rapid preparation of an always fresh ointment. What effect the potassium compounds may have is not stated.

489. Ointment Hydrargyro-Iodide of Potassium.

Red iodide of mercury.... 7 grains.
Iodide of potassium..... 2 scruples.
Lard 1 ounce.

490. Ointment Mercury Nitrate, Modified.

Mercury 1½ drams.
Nitric acid..... 2 drams.
Lard ½ ounce.
Neat's foot oil..... 12½ drams.
Powdered camphor..... ½ dram.

Melt the fats together at a heat not exceeding 170 degrees F., dissolve the camphor in the hot fats, add the mercury previously dissolved in the nitric acid, and stir the mixture while cooling.

491. Ointment Citrine, New Method.

Lard 760 grams.
Mercury 70 grams.
Nitric acid..... 170 grams.

Place the lard in a porcelain-lined evaporating dish of a capacity of 8 quarts, then place the dish in a sand bath and heat to 95 degrees C., turn off the heat and add 70 grams of the nitric acid; stir until reaction ceases, then bring the temperature again to 95 degrees C., turn off the heat and add the remainder of the nitric acid (in which has previously been dissolved the mercury); stir with caution until the reaction becomes less violent, then stir till cold.

492. Ointment Muellaginous.

Vaseline 1 ounce.
Oxide of zinc..... 1 dram.
Powdered gum
tragacanth..... ½ dram.
Distilled water 2½ drams.
Tincture of benzoin..... 30 drops.
Soap powder 6 grains.

Mix the oxide of zinc and vaseline in a mortar and add a little of the muclage prepared in another; then add the soap powder, and finally the tincture. Mix carefully and preserve in a tight box.

493. Ointment Naphthol.

Naphthol 15 grams.
Prepared chalk 10 grams.
Soft soap 50 grams.
Lard 100 grams.

494. Ointment Iodide Potassium.

Potassium iodide 10 parts.
Powdered soap 1 part.
Distilled water 9 parts.
Petrolatum (firm) 80 parts.

Dissolve the iodide and soap in water and mix with the petrolatum.

495. Ointment Iodide Potassium.

Spermaceti ½ ounce.
Olive oil 6 drams.
White wax 2 drams.
Iodide of potassium 4 scruples.
Oil of lemon 3 drops.
Oil of roses..... 3 drops.

Mix. This ointment does not change color by keeping.

496. Ointment Potassium Iodide Stable.

Take of iodide of potassium, medicinal soap and distilled water, of each, 100 parts; glycerine, 600 parts; benzoinated lard, 300 parts. Dissolve the iodide in the distilled water, in a water-bath; add the soap, then the glycerine, then the lard. Stir as soon as the latter becomes liquefied, and in two or three minutes set the containing dish in cold water.

497. Ointment Potassium Iodide and Opium.

Iodide of potassium..... 1½ drams.
Lard 1½ ounces.
Laudanum 1 fl. dram.

498. Ointment Rosemary Compound (Nervine Ointment).

Lard 16 parts.
Suet 8 parts.
Expressed oil of nutmegs... 2 parts.
Yellow wax 2 parts.

Melt together, and when nearly cold add
Oil of rosemary..... 1 part.
Oil of juniper..... 1 part.

499. Ointment, Simple.

Best olive oil (Lucca)..... 3 ounces.
White wax sufficient to make a soft ointment.

One ounce of wax to three of oil is the average quantity required; in winter less, in summer more to be used.

500. Ointment, Simple.

Best sweet oil of almonds. 7 ounces.
Spermaceti 2 ounces.
White wax ½ to 1 ounce.

The simple ointments made with olive oil or oil of sweet almonds are not as liable to become rancid as those made with lard.

501. Ointment Thymol.

Melt together 1 dram thymol and 1 ounce lard in a water-bath and stir until cool.

502. Ointment Zinc Oxide.

Made by triturating 5 ounces of oxide of zinc with 4 ounces of glycerine until a smooth paste is obtained. Then melt 1 ounce of white wax, add gradually 15 ounces of benzoinated lard, keeping the temperature near 140 degrees F.; now stir until the mixture begins to thicken, add the zinc oxide prepared as before, and continue the stirring until thoroughly mixed and perfectly smooth.

BOUGIES, SUPPOSITORIES, CERATES, ETC.

503. Bougies Gelatin.

Best French gelatin..... 3 ounces.
Water 9 ounces.
Glycerine 6 ounces.

Put the gelatin in the water and let it stand twelve hours, or over night. Then add the glycerine and put on a water-bath; evaporate to twelve ounces. When needed for use, the necessary amount should be warmed until soft, the medicinal ingredients added, then pour into molds or roll out on a pill tile.

504 Bougies Iodoform With Glycerine.

Ninety-two and five tenths parts of iodoform triturated with alcohol are rubbed up, in a warm mortar, with a solution of 5 parts of gum arabic, 2.5 parts glycerine, and 2.5 parts of water, until a plastic mass results. This is formed into bougies, which are rolled out between two boards; each bougie is 10 centimeters long and contains about 3.5 grams. If the mass is too friable a little water may be added. The bougies are afterward placed in a warm situation for a couple of hours, when they will be ready for use. They contain now:

Iodoform 92.5 parts.
Glycerine 2.5 parts.
Gum arabic..... 5 parts.

To avoid their flattening during the drying, by their own weight, they should be supported along both sides by a small roll of wax paper.

505. Suppositories Glycerine.

Lanolin, 2 grams; glycerine, 2 grams; cacao butter, 1 gram; white wax, 1 gram. The lanolin is first melted with the wax and the cacao butter. Then the glycerine is added and the mass is poured into molds. The molds should be placed in a mixture of ice and salt to prevent a separation of the glycerine. The suppositories are divided so as to weigh 6 grams each, which is heavier than ordinary suppositories, though the bulk is not much greater.

506. Suppositories Glycerine.

Exsiccated sodium carbonate 4 parts.
Powdered castile soap..... 2 parts.
Glycerine 90 parts.

Heat over water-bath until free from foam; then add

Stearin..... 4 parts.

Again heat until free from foam, strain, and pour into molds.

507. Suppositories Glycerine.

Glycerine 250 parts.
Water 200 parts.
Powdered castile soap..... 20 parts.
Exsiccated sodium carbon-

ate 4 parts.

Triturate, heat over water-bath; add

Stearin 15 parts.

Again heat and strain.

508. Suppositories Glycerine.

Dissolve 10 parts of extra hard "dialyzed" stearin soap in boiling water, add to the solution 90 parts of pure glycerine, filter the whole in a steam funnel and evaporate to 100 parts. Then pour the mass into suppository molds. The suppositories thus prepared are firm, transparent, hygroscopic, and when exposed to the air soon become coated with water blisters.

509. Suppositories Glycerine Ex-tempore.

Anhydrous sodium carbonate 1 part.

Stearin, rasped fine..... 2 parts.

Alcohol 15 parts.

Glycerine, q. s. to make..... 60 parts.

Mix the sodium carbonate and stearin, and pour the alcohol over the mixture. Heat in the water-bath to drive off the alcohol, and add the glycerine. Continue the heat until a limpid solution is obtained, then pour into molds set in ice. The whole operation takes about thirty minutes.

510. Suppositories Glycerine.

Gelatin, cut small, $\frac{1}{2}$ ounce; glycerine, by weight, $2\frac{1}{2}$ ounces; distilled water, sufficient. Place the gelatin in a weighed evaporating dish with sufficient water to cover it; after allowing it to stand a minute or two pour away the excess of water; set aside until the gelatin is quite soft; add the glycerine; dissolve over a water-bath and evaporate until the mixture weighs 1,560 grains; pour the product into suppository molds. Each suppository contains 70 per cent by weight of glycerine.

511. Suppositories Glycerine.

Cacao butter, 80 to 90 parts; pure woolfat, 10 to 20 parts; glycerine, 100 parts. Melt the fats at a low heat, add glycerine, and stir until the mass assumes the consistency of cold cream. Warm gently and pour into molds.

512. Cerate Acid Carbollic.

Lard 10 ounces.

White wax..... 5 ounces.

Balsam of fir..... 1 ounce.

Carbolic acid..... 1 ounce.

513. Cerate Paraffin.

Pure beeswax..... 1 part.
Purified paraffin oil..... 9 parts.

Melt the beeswax on a water-bath and add the oil.

514. Cerate Resin Compound.

Resin 12 troy ounces.
Yellow wax..... 7 troy ounces.
Turpentine 6 troy ounces.
Lard 24 troy ounces.

Melt them together, strain the mixture through muslin, and stir constantly until cool.

515. Oleate Mercury.

White castile soap, in fine powder, 8 ounces; bichloride of mercury, in fine powder, $3\frac{1}{4}$ ounces. Mix carefully together in a mortar, and add distilled water sufficient to form a pasty mass; throw this immediately into boiling water, and boil carefully until a yellow oily liquid is formed; allow to cool; pour off the water and wash the resulting oleate with distilled water until tasteless; place it in an evaporating dish and on a water bath heat until all the water is driven off. By following this process an oleate of mercury will be obtained resembling very much recently prepared citrine ointment. This can be diluted with lard or lanolin to any desired strength.

516. Oleate Mercury.

Made by precipitating solution of nitrate of mercury with solution of oleate of potassium. This is a 28 per cent oleate, and can be diluted as wanted.

517. Bassorin Paste.

Gum tragacanth paste (15 per cent, triturated with water) is filtered in a steam jacketed funnel. By this process a pure mucilage is obtained, while the cellulose, pectin and other impurities remain in the filter. The slimy filtrate is then carefully evaporated. In making the paste, glycerine is added. Another method used to make the paste is to soak 1 part of pure bassorin in 15 parts of water, adding after the paste is formed 25 per cent of white dextrine and 10 per cent of glycerine.

As prepared from salep: Five parts of powdered salep are stirred with 95 parts of cold water until a smooth mucilage is obtained, then heating for half an hour on the steam bath. This contains less bassorin but more starch.

In making bassorin paste employ only moderate heat. The paste made from bassora gum yields a much darker product than that made from gum tragacanth, while from salep root, it is said, the large amount of starch present greatly impedes the process.

518. Benzolated Lard.

Dissolve in 100 parts of melted lard 1 part of true sublimed benzole acid, the product being uniform, stable, of a finer appearance, better odor and less reducing power than that prepared in the usual manner.

519. Coloring Ointments.

Color is often imparted to fats by the addition of pigments in powder, but as a rule these are objectionable. The best method to color the ointment, red or crimson, provided the ingredients of the ointment do not antagonize it, is to steep a sufficient quantity of alkanet root to give the desired shade, in a part of the melted ointment base, before mixing with the other ingredients. For yellow, annatto, and for green walnut leaves can be used in the same way.

PLASTERS.

520. Plasters, Adhesive Compound for.

A compound to be added to the amount of 25 per cent to medicated plasters, to make them adhesive. Ten parts of caoutchouc thoroughly washed and cut into small pieces and liquefied by gentle heating. In another vessel melt 25 parts of anhydrous lanolin and 25 parts of resin, to which then add the melted caoutchouc, constantly stirring. The stirring is to be continued a half hour, and the heat kept at 120 to 130 degrees C. Then raise the heat until the mixture begins to foam in order to produce slight vapors. When all the caoutchouc is fully dissolved, add 10 parts of gum dammar in small pieces, and 50 parts more of resin, and pour the warm solution into porcelain jars for its preservation. For a light colored plaster mass, employ gutta percha instead of caoutchouc in equal quantity. The gutta percha is softened in warm water, thoroughly washed and drawn out into thin ribbons, which are later cut into small pieces.

521. Plaster Adhesive.

Lead plaster 10 ounces.
Yellow wax 1 ounce.
Beef suet 1 ounce.
Soap, powdered, 1 ounce.
Gum dammar $2\frac{1}{2}$ ounces.
Burgundy pitch $2\frac{1}{2}$ ounces.

Which is then strained. A portion of this is melted on a water bath, and sufficient benzole added to keep it of a syrupy consistency when cold. It may then be spread on sized muslin with an ordinary brush, and forms an excellent adhesive plaster.

622. Plaster Adhesive.

Powdered gum dammar.... 560 parts.
 Oil of sweet almonds 140 parts.
 Castor oil 70 parts.
 Glycerine 30 parts.
 Aniline red, sufficient quantity.
 Spirit of ether (equal quantities of ether and spirit)
 225 to 240 parts.

The first four ingredients are to be heated in a copper vessel until the resin is fused, the aniline red then added, and when the mixture has half cooled the spirit of ether is to be poured in. An emulsive liquid is thus formed of the consistency of syrup. A layer is then spread on a material previously coated with a mucilage of starch flour or isinglass. The court plaster so made is said to be strongly adhesive, bright and shining, and free from any irritating effect on the skin.

523. Plaster Adhesive Fluid.

Dammar resin, powdered.. 560 parts.
 Oil of almonds 142 parts.
 Castor oil 70 parts.
 Best glycerine 10 parts.

Melt till the mass flows smoothly, and when half cold add by degrees 225 to 240 parts of spirit ether, in which aniline, free from arsenic, or any other coloring matter, has been dissolved. The plaster thus obtained is of the consistency of a balsam. The dammar resin is easily soluble in fat oils; by the addition of spirit of ether it is partly precipitated, but in a very finely divided, doughy state.

524. Emplastrum Antapoplecticum.

Galbanum 15
 Pyrethrum root 5
 Long pepper 5
 English castor 5
 Gum turpentine 10
 Yellow wax 10

525. Plaster Burgundy.

Burgundy pitch 70 parts.
 Yellow wax 30 parts.

526. Plaster Cantharides.

Cantharides in fine powder 6 ounces.
 Canada balsam..... 8 ounces.
 Yellow wax..... 5 ounces.
 Lard 1½ ounces.

The wax, lard and balsam are melted together; the cantharides then added, and allowed to macerate for several hours. The disadvantage of brittleness during the winter months is entirely overcome by this modification. The plaster, while sufficiently adherent, is readily removed without tearing the blister.

527. Plaster Cantharidin.

Yellow wax..... 400 parts.
 Beef suet..... 100 parts.
 Venice turpentine..... 100 parts.
 Cantharidin 5 parts.

528. Plaster Caoutchouc.

The base of the plaster consists of lanolin, benzoated suet, caoutchouc and dammar resin in varying proportions, a small amount of glycerine being added to prevent cracking from exposure to the air. The solution of caoutchouc is made by macerating the commercial gum in 5 times its weight of benzine, when it first swells out and after 3 or 4 days is completely dissolved.

529. Plaster Caoutchouc and Zinc Oxide.

Dammar resin..... 15 parts.
 Benzoated suet..... 25 parts.
 Lanolin 15 parts.
 Caoutchouc (No. 528) 5 parts.
 Glycerine 20 parts.
 Zinc oxide..... 20 parts.

The resin is melted, the suet added, and the whole strained through 3 or 4 folds of muslin, and while still warm the lanolin and solution of caoutchouc are briskly stirred in. Finally, the benzine is carefully evaporated, protecting from the fire. The zinc oxide is smoothly rubbed up with the glycerine and is added to the mass, which is worked until the mixture is uniform.

530. Plaster Caoutchouc and Iodoform.

Resin 15 parts.
 Suet 30 parts.
 Lanolin 20 parts.
 Caoutchouc 5 parts.
 Glycerine 10 parts.
 Iodoform 20 parts.

And the process of manipulation is similar to that above, except that the iodoform rubbed with the glycerine is added to the cooled mass to avoid evaporation.

Other plasters suggest themselves—mercury, for instance, being worked up with the lanolin and added to a lukewarm mixture of the suet, resin and caoutchouc solution, from which the benzine has been evaporated.

531. Plaster Court.

Isinglass 125 grains, alcohol 1¼ fluid ounces, glycerine 12 minims, water and tincture of benzoin each sufficient quantity. Dissolve the isinglass in enough water to make the solution weigh 4 fluid ounces. Spread half of the water with

a brush upon successive layers of taffeta, waiting after each application till the layer is dry. Mix the second half of the isinglass solution with the alcohol and glycerine and apply in the same manner. Then reverse the taffeta, coat it on the back with tincture of benzoin, and allow it to become perfectly dry. The above quantities are sufficient to make a piece of court plaster 15 inches square.

532. Plaster Court.

Sew together 2 meters of silk taffeta, each $\frac{1}{2}$ meter wide, so as to form a piece of 1 meter square (or prepare in a similar manner, a piece of 1 yard square), and stretch it tightly on a frame.

Cut 100 grams of best isinglass into small pieces, heat it twice on a water-bath, with a small quantity of water, evaporate the strained liquid to 600 grams and then add 2 grams of glucose.

To prevent the first application from soaking too far through the fabric, it should be applied cold, and in a cold room, by means of a hair-brush of at least 2 inches in breadth, care being taken that every part of the surface is coated only twice without pressure. Any apparent inequalities thus produced are equalized during subsequent applications. These precautions must be observed during the first 3 applications, each of which must be made in a direction diagonal to the preceding. Subsequent applications, likewise alternating in direction, may be made in a moderately warm room, and must be continued until the mixture is consumed. Should anything be left over, not sufficient for a whole application, it is to be diluted with a little water to make a sufficiently large volume. Each subsequent application must be made only after the preceding one has become completely dry.

Finally, while the fabric is still stretched over the frame, the back is coated with tincture of benzoin diluted with an equal quantity of alcohol (some use a colorless resin solution). When dry it is removed from the frame, the seam is cut out, and the plaster rolled up so that the spread surface is on the outside.

533. Plaster Court Arnicated.

Proceed as in No. 532 except that the solution of isinglass is divided into two halves, the first of which is applied as such, while the second is mixed with 50 grams of tincture of arnica.

534. Plaster Court Benzoated.

Prepared like the last, only that 2 grams of benzoic acid dissolved in alcohol are added, instead of the tincture of arnica.

535. Plaster Court Salicylated.

Like the preceding, except that 2 grams of salicylic acid dissolved in alcohol are used.

536. Plaster Court.

Take isinglass 10 parts, dissolve it in a sufficient quantity of hot water to make 120 parts after draining. Take 60 parts of this solution and by means of a brush spread a sufficient number of coatings on stretched silk (taffeta), which should measure for every 30 grains of isinglass, 104 centimeters in length by 42 in width (about 40 inches by 16). Each coating should be allowed to dry before applying the next. The remaining 60 parts of this isinglass solution are gradually mixed with 40 parts of alcohol and 1 part of glycerine, and this mixture is brushed over the fabric in the same manner as the previous solution. Finally, the back of the fabric is coated with sufficient quantity of tincture of benzoin, and the plaster is then well dried and preserved in a dry place. It is lustrous, and when moistened becomes very adhesive to the skin.

537. Plaster Court (Deschamps).

A piece of fine muslin, linen or silk is fastened to a flat board, and a thin coating of smooth, strained flour paste is given to it; over this, when dry, two coats of colorless gelatin, made into size, with water, quantity sufficient, are applied warm.

538. Plaster Court, Substitute.

Mastic, 3 drams; balsam of Peru, 1 dram; narcotine, 6 drams; chloroform, 6 drams. It forms a calming and adhesive preparation suitable for tender, inflamed, or abraded surfaces. Bits of linen or silk dipped into it answer the same purpose as the so-called court plaster.

539. Plaster Diachylon.

Four parts of lard, 4 of olive oil, 4 of sifted litharge, and one of water, are boiled gently on a moderate fire, with constant stirring and addition of water. When the litharge is completely dissolved, and, on cooling, a sample can be kneaded by the fingers without sticking, the vessel is taken off, first hot water and then half as much cold water are added to the contents, and the whole thoroughly stirred together. This process is repeated after pouring off the first water; then the water is evaporated and the plaster rolled out.

540. Plaster Diachylon and Gum.

Lead plaster.....	1,500 parts.
Yellow wax.....	250 parts.
Olive oil.....	50 parts.
Burgundy pitch.....	100 parts.
Turpentine	150 parts.
Ammoniac	30 parts.
Elemi	100 parts.
Galbanum	30 parts.
Sagapenum	30 parts.

Dissolve the four gums in alcohol and evaporate the solution almost to the consistency of an extract. Melt the other ingredients and with these incorporate the residue. The solution in alcohol is sometimes omitted, the whole being merely melted together.

541. Plaster Iodoform.

Iodoform, in fine powder.....	1 part.
Adhesive plaster.....	2 parts.
Lead plaster.....	2 parts.

542. Plaster Lead, to Heighten Tenacity of.

Use vaseline, being careful to use only the proper proportions. For a plaster of two months of age 6 per cent. of vaseline is sufficient, while 10 per cent. is required for a plaster a year or more old. A crumbling specimen needs about 6 per cent. For spreading nicely, if the plaster is to be used within a few weeks, 5 to 6 per cent. of vaseline is sufficient, but for long preservation use 8 per cent. An advantage from the use of vaseline is that the plaster never develops a rancid odor, as is the case with vegetable oils.

543. Plaster Menthol.

Lead plaster	75 parts.
Beeswax, yellow	10 parts.
Resin	5 parts.
Menthol, any desired percentage.	

Melt the lead plaster, wax and resin together with gentle heat; remove from the fire and add the menthol.

544. Plaster Mercury.

Dammar, 20; tallow, 34; lanolin, 20; caoutchouc, 6; mercury, 20 parts. Rub the mercury with the lanolin until no globules remain visible, and add this to the nearly cool mixture of the other ingredients, prepared as above stated.

545. Plaster Opium.

Lead plaster, 1 pound; melt, add of powdered thus, 3 ounces; mix, and further add of powdered opium, $\frac{1}{2}$ ounce; water, 8 fluid ounces, and boil to a proper consistency.

546. Plaster Opium.

Litharge plaster, 12 ounces; Burgundy pitch, 3 ounces; liquefy by heat, then add by degrees, of powdered opium $\frac{1}{2}$ ounce, and mix them thoroughly.

547. Plaster Opium.

Powdered opium, 1 ounce; resin plaster, 9 ounces. Melt the plaster and add the opium.

548. Plaster Potassium Iodide.

Olibanum	6 drams.
Yellow wax	1 dram.
Olive oil	2 drams.
Potassium iodide	1 dram.

Heat the olibanum and wax; remove from the heat; add the oil, and last the iodide of potassium in fine powder, stirring it thoroughly.

549. Plaster Quinine.

Quinine oleate	1 ounce.
Beeswax	4 ounces.
Yellow resin	3 ounces.
Suet	3 ounces.

Melt the beeswax, resin and suet together, stir constantly, adding the oleate of quinine while cooling.

550. Plaster Tar.

Tar	40.0.
Black pitch	20.0.
Burgundy pitch	20.0.
Yellow wax	20.0.

EMULSIONS.**551. Emulsions.**

To one part of powdered acacia in a dry mortar add 2 parts of oil; mix, then add $1\frac{1}{2}$ parts of water all at once; then, with a dozen whirls of the pestle, the union is complete, as indicated by the crackling noise and change of color; then dilute with care, ad lib. With oils like cod liver oil, castor, etc., and balsams, one-half the quantity of acacia, or less, will answer, but if you change the quantity of acacia, you must observe the exact proportion of water, as given above, that is to be added in the first instance, i. e., one-half of the combined quantities of acacia and oil.

552. Casein as an Emulsifying Agent.

Separate the casein from milk by first adding water of ammonia—about two ounces to the gallon—to saponify the fatty matter; after standing at rest twenty-four hours the milk is skimmed, and the casein precipitated by addition of acetic acid. The curd is collected and pressed strongly, and sodium bicarbonate, 150 grains for each gallon of milk, is added, together with sugar, about three pounds for each gallon, and the whole thoroughly mixed and completely desiccated.

This saccharated casein may be substituted for acacia in the preparation of emulsions either of fixed oils, balsams,

oleo-resins, or even volatile oils—the manipulations being the same as those ordinarily pursued. For balsams, oleo-resins and volatile oils, it is sufficient to add alcohol enough to produce a solution, and shake this in a bottle with an equal volume of a 30 per cent aqueous solution of the saccharated casein, afterwards adding the remainder of the water, little by little. The emulsions are said to be remarkably permanent and to be palatable and acceptable to the stomach.

553. Condensed Milk for Emulsions.

To make a pint of 50 per cent emulsion of cod-liver oil, take of

Cod-liver oil.....	8 fl. ounces.
Condensed milk.....	3 fl. ounces.
Glycerine or syrup.....	3 fl. ounces.
Water	2 fl. ounces.

Flavoring oils—bitter almond, 10 drops; wintergreen, 15 drops.

Rub the condensed milk around in a dry mortar, and gradually add the cod-liver oil, working it in as is directed for making emulsions generally. When thoroughly incorporated add the glycerine, and lastly the water.

554. Emulsion Creosote.

Oil of sweet almonds...	5 fl. ounces.
Beechwood creosote....	2 fl. drams.
Mix, and add:	
Gum arabic.....	3½ ounces.
Mint water.....	16 fl. ounces.

555. Emulsion Oil Castor.

Castor oil.....	1 ounce.
Syrup rhubarb.....	4 drams.
Alcohol	4 drams.
Essence peppermint.....	2 drops.

Mix, and shake well together. The taste of the oil is completely disguised.

556. Emulsion Oil Castor.

Castor oil.....	4 troy ounces.
Powdered gum arabic.	1 troy ounce.
Distilled water.....	1½ troy ounces.
Syrup	3 fl. ounces.
Cinnamon water.....	3 fl. ounces.
Spirit of cinnamon....	12 minims.

Emulsify the oil with the gum and distilled water, then add the other ingredients gradually with constant trituration. This emulsion contains 33 per cent of castor oil.

557. Emulsion Oil Castor.

Castor oil.....	1 fl. ounce.
Powdered acaela.....	3 drams.
Oil bitter almonds.....	2 minims.
Oil cloves.....	1 minim.
Saccharin	1 grain.
Water to make.....	4 fl. ounces.

Mix the oils with the gum in a dry mortar, add ½ fluid ounce of water at once, stirring until emulsion is formed. Then add the saccharin, previously dissolved in water by the aid of ½ grain sodium bicarbonate, and finally the remainder of the water.

558. Emulsion Oil Chenopodium.

Celery seed	2 drams.
Purified extract of licorice	1 dram.
Powdered acaela	5 drams.
Oil of chenopodium.....	30 minims.
Oil of almond (expressed)	½ ounce.
Sugar	4 drams.
Water q. s. ad.....	4 ounces.

Mix the seed with the extract and reduce to a very fine powder; triturate with sufficient water to form a thin liquid, and strain with expression. Emulsify the mixed oils in a dry mortar, with the acaela and sugar, using a little water if the paste becomes too thick. Finally, add the strained liquid and form a perfect emulsion; add water to make the liquid measure 4 fluid ounces.

559. Summer "Cod Liver Oil."

The following mixture is said to be an excellent substitute for cod liver oil during the summer months: 10 parts sodium iodide, 40 parts sodium chloride, 20 parts sodium bromide, 500 parts distilled water, 1 or 2 tablespoonfuls of which is to be taken daily in a cup.

560. Emulsion Oil Cod Liver.

Two thousand five hundred grams of cod liver oil are emulsified with 20 grams of sodium hydrate and 280 grams of water; 25 grams of calcium hypophosphite, 10 centigrams of saccharine, and 30 minims each of oil of anise, oil of wintergreen and oil of caraway, with 80 drops of acetic ether are added, producing an emulsion, which is stable and pleasant in taste and odor.

561. Emulsion Oil Cod Liver.

Use a 20 per cent solution of potash soap, with which it is possible to incorporate 80 per cent of oil in the emulsion. Moreover, such an emulsion is tasteless if taken in coffee or milk, can be easily flavored to suit with syrups, creosote or other substances. A typical formula consists of 2 parts of potash soap dissolved in 10 parts distilled water, mixed with 40 parts castor oil, and flavored with 6 drops oil of peppermint. Turpentine may be emulsified by using 40 parts of 10 per cent potash soap solution, and 50 parts of oil of turpentine, and such an emulsion affords no separation of turpentine upon dilution with water. The method is applicable also in the preparation of volatile oil emulsions.

562. Emulsion Oil Cod Liver.

Take of cod liver oil, 40 fluid ounces; tragacanth, in powder, 200 grains; simple tincture of benzoin, $1\frac{1}{2}$ fluid ounces; spirit of chloroform, $\frac{1}{2}$ fluid ounce; glycerine, 2 fluid ounces; oil of cassia, 2 fluid drams; distilled water, a sufficient quantity. Place the oil in a dry bottle and pour in the tragacanth, tincture of benzoin and spirit of chloroform, previously well mixed; agitate briskly for a minute, then add all at once 1 pint of distilled water, and agitate as before. Lastly, add the essential oil, glycerine, and sufficient distilled water to produce 4 pints.

563. Emulsion Oil Cod Liver.

Cod liver oil..... 6 drams.
The yolk of one egg.
Powdered tragacanth..... 10 grains.
Elixir saccharin $\frac{1}{2}$ dram.
Tincture of benzoin..... 40 minims.
Spirit of chloroform..... 3 drams.
Oil of wintergreen..... 5 minims.
Oil of sassafras..... 5 minims.
Oil of bitter almonds..... 2 minims.
Water to make..... 12 ounces.

Put the tragacanth in a dry mortar and triturate it with a little of the oil, then add the egg yolk and stir briskly, adding water until the mixture thickens; add a little more oil, then more water, and so on alternately, diligently stirring all the time, until 4 ounces of water have been so used and the whole of the cod liver oil. Transfer to a pint bottle, add the elixir, tincture, spirit and essential oils, previously mixed; shake well and make up to 12 ounces with water.

For a hypophosphited emulsion dissolve in the water 48 grains each of calcium and sodium hypophosphites.

564. Emulsion Oil Cod Liver, Pancreatic.

Saccharated pancreatin. 1 ounce.
Water 4 fl. ounces.
Sugar 7 ounces.
Cod liver oil..... $1\frac{1}{2}$ pints.
Oil of wintergreen..... 20 drops.
Oil of bitter almonds.... 5 drops.

With the saccharated pancreatin, sugar and water form a thick syrup; to this add the oils and mix by agitation. An emulsion is readily formed which is, in the author's opinion, preferable to the thick, mucilaginous emulsions, made with gum arabic or tragacanth. It separates on standing, but is readily mixed again on agitating. If it is desirable to have the emulsion white, substitute a little lime water for an equivalent quantity of water.

565. Oil Cod Liver Deodorized.

Cod liver oil..... 1,000 parts.
Tar, Norway, 4 parts.
Water of ammonia 20 parts.

Dissolve the tar in the water of ammonia, add the solution to the oil, heat the mixture until it ceases to smell of ammonia, and filter after cooling.

566. Oil Cod Liver Deodorized and Iron.

Take of cod-liver oil, 1 pint; dried sulphate of iron, 64 grains; powdered castile soap, 128 grains; powdered charcoal, 1 ounce; ground coffee, $\frac{1}{2}$ ounce (or powdered chocolate $\frac{1}{4}$ ounce); hot water q. s. Dissolve the sulphate of iron and castile soap, each separately, in a sufficient quantity of hot water, mix the two solutions, and after washing the resulting precipitate (oleate of iron), with water, triturate it in water with the cod-liver oil (previously heated in a water-bath) gradually added; then add the remaining ingredients, subject the whole to a water-bath for an hour, and filter, while hot, through paper or flannel. The preparation is dark brown, almost transparent, and has only a faint odor.

567. Oil Cod Liver and Extract Malt.

Cod-liver oil..... 4 fl. ounces.
Tragacanth, in powder... 12 grains.
Extract of malt..... 3 fl. ounces.
Water 1 fl. ounce.

Mix the tragacanth by trituration with the extract of malt; then add the cod-liver oil gradually, with uninterrupted trituration, to a 12-ounce bottle and shake vigorously for a few minutes.

568. Oil Cod Liver and Extract of Malt.

Fifty moderately warmed malt extract are triturated with 50.0 cod-liver oil, added in small portions, so as to insure thorough admixture; if the preparation becomes too thick, add a small quantity of water.

569. Oil Cod Liver Ferrated.

Cod-liver oil..... 20 parts.
Alcohol of 90 per cent..... 15 parts.
Liquor potassae (s. g., 1.120
to 1.130)..... 33 parts.

Mix and saponify by the aid of heat, in a spacious vessel of iron or enameled ware, stirring continuously. Then add

Liquor ferri perchloridi..... 27 parts.
Water 50 parts.

and continue the heat and agitation until the iron soap is precipitated in the shape of a brown mass. Let cool, and after carefully decanting the aqueous liquid so far as possible, and, if necessary, evaporat-

ing all watery residue, add to the iron soap five times its volume of cod-liver oil, and again raise the temperature until the soap is entirely dissolved. Add cod-liver oil sufficient to bring the whole up to 270 parts. The product is a ferrated cod-liver oil containing 1 per cent of iron, of a pleasant flavor, and of a fine Malaga brown color. It keeps well.

570. Oil Cod Liver Ferrated.

Ferric chloride..... 3 parts.
Cod-liver oil..... 997 parts.

Dissolve the ferric chloride by triturating it in a mortar with the oil gradually added, then filter. The product is a clear reddish-brown liquid, containing 1 per cent of iron. This preparation has heretofore been usually made with ferric benzoate, but the latter salt is not soluble in cod-liver oil in the cold. On the other hand, heating increases the fishy taste of the oil.

571. Oil Cod Liver Iodized.

Iodine 1 part.
Chloroform 3 parts.
Cod-liver oil..... 996 parts.

Triturate the iodine in a mortar with the chloroform, and gradually add the oil until solution has taken place. The product has the same color, odor and taste as the original oil. When shaken with gelatinized starch, it should not color the latter.

572. Oil Cod Liver Ferro-Iodized.

Iron, in powder..... 2 parts.
Iodine 4 parts.
Cod-liver oil, enough to
make 1,000 parts.

Triturate the iron and iodine in a mortar with 40 parts of cod-liver oil and a little ether until all the iodine has disappeared and a black mixture has resulted, mix this with enough cod-liver oil to produce 1,000 parts, and filter. The product has a brownish-red color, and contains 5 per cent of ferrous iodide.

573. Oil Cod Liver Chalybeate.

Brown cod-liver oil,
Distilled water, of each.. 8 ounces.
Carbonate soda, cryst.... 3½ drams.
Sulphate of iron..... 3 drs. 2 scrs.

The sulphate of iron and carbonate of soda are dissolved separately in distilled water; the solutions are then mixed and added immediately to the oil. The mixture is kept in a wide-mouth bottle, exposed to the air and repeatedly shaken for eight days, after which the oil is separated from the solution of sulphate of soda and filtered. This contains about 1 per cent of sesquioxide of iron. It requires to be kept without exposure to the air, as it soon becomes rancid and even resinifies.

574. Cremor Morrhuae.

Cod-liver oil..... 6 fl. ounces.
Yolk of one egg.
Tragacanth, powdered.... 10 grains.
Elixir of saccharin..... 30 minims.
Tincture benzoin..... 45 minims.
Spirits chloroform..... 3 fl. drams.
Flavoring oils..... 12 minims.
Distilled water, sufficient
to produce..... 12 fl. ounces.

Measure 4 fluid ounces of the distilled water, place the tragacanth in a dry mortar and triturate with a little of the cod-liver oil, then add the yolk of egg and stir briskly, adding water as the mixture thickens. When of a suitable consistency add the remainder of the oil and water alternately, with constant stirring, avoiding frothing. Transfer to a pint bottle and add the remaining ingredients, shake well, and make up with distilled water, if necessary, to 12 fluid ounces.

575. Cremor Morrhuae cum Sodii et Calcii Hypophos.

Incorporate with 12 ounces cremor morrhuae 48 grains each of hypophosphites of soda and lime, proceeding as in above formula.

576. Cremor Morrhuae Pancreaticus.

Cremor morrhuae 12 fl. ounces.
Pancreatin 30 grains.
Bicarbonate soda 150 grains.

Mix the pancreatin and bicarbonate in the water before adding it to the emulsion. If hypophosphite of soda be desired, it may also be added at the same time in the proportion of 4 grains to each ounce of the finished cream.

577. Cremor Phosphoratus.

Cremor morrhuae, 12 fluid ounces; phosphorated oil, 29 minims. Add the phosphorized oil to the cod liver oil before emulsifying.

578. Emulsion Oil Olive.

Tincture opium 12 minims.
Olive oil, pure 6 drams.
Gum acacia pulv..... 3 drams.
Cherry laurel water..... 2 drams.
Water enough to make..... 6 ounces.

Mix the oil and acacia and 4½ ounces of water. Make emulsion and then add the other ingredients.

579. Emulsion Phosphoric.

Phosphoric acid, dilute... 1½ ounces.
Yolks of three eggs.
Cod liver oil 8 ounces.
Glycerine 2½ ounces.
Oil of bitter almonds.... 10 minims.
New England rum 8 ounces.
Orange flower water
enough to make 32 ounces.

580. Emulsion Pumpkin Seed and Male Fern.

Forty parts pumpkin seed are bruised with $7\frac{1}{2}$ parts sugar and a little water, to a homogeneous paste; 4 to 8 parts of the oleo resin of male fern, $22\frac{1}{2}$ parts sugar and 150 parts water are then gradually added.

581. Emulsion Salol.

Salol	4.
Gum arabic	4.
Gum tragacanth	2.
Tincture tolu	10.
Simple syrup or syrup tolu.....	30.
Distilled water, sufficient.	

The simple syrup may be replaced by aromatic syrup. The tincture tolu should be first mixed with the water and after partial precipitation passed through a cloth filter. Add sufficient water to give 50 cgm. of salol to the tablespoonful.

582. Emulsion Terebene.

Terebene	160 minims.
Cottonseed oil	160 minims.
Powdered acacia	360 grains.
Powdered sugar	120 grains.
Water to make	4 fl. ounces.

The terebene is to be mixed with the cottonseed oil and then emulsified in the usual manner.

FLUID EXTRACTS.

583. Extract Cascara Sagrada Fluid.

Cascara sagrada (40 powder) 100 parts.	
Calcined magnesia	1 part.
Alcohol	100 parts.
Water, q. s.	

Mix the alcohol with the water in the proportion of 2 to 3 of water; moisten the mixed powders thoroughly with the menstruum, and let it stand until the bitterness disappears; then pack in a percolator and percolate, adding more water, if necessary, until 200 parts extract is obtained. Sweeten with glycerine and flavor with any aromatics to taste.

584. Extract Cascara Sagrada Fluid (Miscible).

Cascara sagrada, 1 year old, No. 20, powd.....	1 pound.
Rectified spirit	4 fl. ounces.
Distilled water, q. s.	

Moisten the bark with a portion of the water; allow it to remain for a few hours to soften and swell; place loosely in a percolator, and percolate with more water until exhausted. Evaporate on a water-bath to the consistency of a brittle extract, which, when cold, treat with cold

water until thoroughly disintegrated. Allow this to stand and settle. Strain through flannel, and evaporate the strained liquor to 12 fluid ounces, and add the rectified spirit when cold.

585. Extract Cascara Sagrada Liquid.

Take of cascara bark, in No. 40 powder, 1 pound; calcined magnesia, 2 ounces; distilled water, $1\frac{1}{2}$ pints; proof spirit, a sufficient quantity. Mix the powder in a large mortar, and beat to a thin paste with the water. Allow to stand for 12 hours, and dry over a water bath. Reduce the dry mass to powder, moisten with 18 fluid ounces of proof spirit, and pack tightly in a series of 6 percolating tubes. Percolation is then effected by means of proof spirit, passing the percolate from the first tube through the second, and from the second through the third, and so on. The first 14 ounces that pass through the last (the 6th) tube is set aside, the percolation continued to exhaustion, the weak percolate evaporated to the consistency of a syrup, mixed with the reserve, and the measure brought to 16 fluid ounces with proof spirit.

586. Extract Corn Silk Fluid.

Green corn silk.....	16 troy ounces.
Alcohol	25 troy ounces.
Water	25 troy ounces.
Glycerine	2 fl. ounces.

Macerate the corn silk 1 week in 12 ounces of alcohol. Press through fruit press, then pack in a percolator, add 4 ounces of water to the expressed extract and percolate the corn silk with this menstruum. Reserve the first 14 ounces, and continue the percolation with dilute alcohol until the drug is exhausted or until about 24 ounces of percolate have been obtained. Add the glycerine, evaporate to about 2 ounces, and add the reserved portion; filter if necessary.

587. Extract Hydrangea Arborescens.

Hydrangea root, in fine powder	16 ounces.
Alcohol,	
Diluted alcohol, of each quantity sufficient.	

Moisten the powder with alcohol; after 24 hours pack it in a percolator, and add enough alcohol to obtain 12 ounces of percolate, and set it aside. Then add diluted alcohol until the root is exhausted, evaporate this to 4 fluid ounces, and add to it the 12 ounces first obtained so as to make 1 pint of fluid extract.

588. Extract Licorice Fluid for Masking the Taste of Quinine.

Dry licorice extract..... 20 parts.
 Hot water.....10 to 20 parts.
 Glycerine 20 parts.

Dissolve and let cool, and to the solution add:

Alcohol 10 parts.
 Distilled water, q. s. ad.... 80 parts.

One dram of this solution masks the taste of about 3 grains of quinine.

589. Extract Licorice Fluid for Masking the Taste of Quinine.

Acacia, in fine powder.. ½ ounce.
 Extract glycyrrhiza, in fine powder..... ½ ounce.
 Sugar ½ ounce.
 Spirit nitrous ether..... 1 fl. ounce.
 Wine of antimony..... 1 fl. ounce.
 Camphorated tincture opium 2 fl. ounces.
 Distilled water..... 12 fl. ounces.

Having mixed well the powders, add 6 fluid ounces of water gradually and rub to a paste. Place this in an evaporating dish and heat until perfectly fluid. Add the sweet spirit of nitre, wine of antimony and paregoric, and enough water to make the required amount.

590. Extract Licorice Fluid.

Moisten the drug in No. 40 powder (16½ ounces) with 16 fluid ounces of water, containing ½ fluid ounce of water of ammonia; pack moderately tight in a cylindrical glass percolator, and exhaust the drug by percolation with more of same menstruum; heat the percolate and keep it boiling 10 minutes, add water if too thick; set aside to cool, filter and wash the mass on the filter with cold water, evaporate the filtrate to 12 fluid ounces, and add 4 fluid ounces alcohol. The fluid extract is very sweet and destitute of the bitter aftertaste of the pharmacopoeial preparation.

591. Extract of Rhubarb and Senna Fluid.

Fluid extract of senna.. 12 fl. ounces.
 Fluid extract of rhubarb 4 fl. ounces.
 Bicarbonate of potassium ½ ounce.
 Tincture of ginger..... 1 fl. ounce.
 Oil of cloves..... 8 minims.
 Oil of anise..... 16 minims.

Dissolve the bicarbonate in the fluid extracts, add the tincture containing the oils, and mix.

592. Extract Triticum Liquid.

Triticum rhizome, in No. 20 powder. 10 ounces.
 Rectified spirit,
 Distilled water, of each.. q. s.

Moisten the powder with 4 fluid ounces of distilled water, pack in a percolator, and pour boiling distilled water upon it until it is exhausted. Evaporate the percolate to 15 fluid ounces, add to it 5 fluid ounces of rectified spirit, mix, and set aside for 48 hours. Then filter the liquid, and add to the filtrate enough of a mixture composed of 3 fluid parts of distilled water and one of rectified spirit to make the liquid extract measure one pint.

593. Extracts Fluid, Non-Alcoholic.

These alcoholic fluids, so-called, are supposed to represent the water soluble constituents of the drugs. The following is a type:

Pinus canadensis, No. 40 powder 32 troy ounces.
 Water, 1 part,
 Alcohol, 2 parts, sufficient.

Moisten the drug with a sufficient amount of the menstruum and allow to macerate in a percolator for 12 hours. Then percolate to exhaustion with the menstruum, recover the alcohol by distillation, and evaporate the remaining solution to 8 fluid ounces, and finally add 8 fluid ounces of glycerine and mix thoroughly.

594. Extract Calendula Fluid, Non-Alcoholic.

Calendula (flowering herb), No. 40 powder.. 16 troy ounces.
 Alcohol, 1 part,
 Water, 2 parts, sufficient.
 Glycerine 8 fl. ounces.

Proceed as above.

Non-alcoholic witch hazel can be made as the calendula, simply substituting properly ground witch hazel in the formula.

POWDERS.

595. Powder Anise.

Calcined magnesia..... 1 ounce.
 Powdered rhubarb..... 1 dram.
 Oil of anise..... 30 drops.
 Tincture of rhubarb quantity sufficient to color pink.
 Mix and triturate thoroughly.

596. Powder Calumbo Compound.

Bismuth subnitrate 3 parts.
 Sodium bicarbonate..... 3 parts.
 Gum arabic..... 3 parts.
 Rhubarb root..... 1½ parts.
 Calumbo root..... 1½ parts.
 Cinnamon bark..... 1½ parts.
 Ginger 1½ parts.

597. Powder Eecoprotic.

Powdered rhubarb,
 Calcined magnesia, of each..1 ounce.

598. Powders Guarana Compound (Nerve Powders).

Guarana paste.....	1.0
Aromatic powder.....	0.25
Sugar of milk.....	0.5

For 1 powder.

Guarana paste is made by mixing 30 parts of finely powdered guarana with 1,000 parts of chocolate.

599. Powder Licorice Aromatic.

Prepared by thoroughly mixing 2 drams of aromatic powder, 6 drams of powdered extract of licorice, and 15 grains of carbonate of ammonium.

600. Powder Licorice Compound.

Senna	2 parts.
Licorice powder	2 parts.
Fennel	1 part.
Sulphur (sublimed)	1 part.
Cream of tartar	4 parts.
Sugar	2 parts.

601. Powder Licorice Compound, Modified.

Powdered senna	2 parts.
Powdered licorice root.....	2 parts.
Anise	1 part.
Sulphur	1 part.
Sugar	5¾ parts.
Powdered ginger	¼ part.

602. Powder Rhubarb Compound.

Magnesia	½ ounce.
Cream of tartar	½ ounce.
Powdered rhubarb	½ ounce.
Powdered chamomile	½ ounce.
Oleo-sacch of fennel	½ ounce.

603. Powder Salicin Compound.

Salicin	2 scruples.
Aromatic powder	1 dram.

Mix, and divide into 12 powders.

604. Powder Salicin Compound.

Salicin	15 grains.
Tartar emetic	1 grain.
Powdered sugar	15 grains.

Mix and divide into 10 powders.

604a. Powder (Pistolia) for Gout.

Bryonia root	10 grams.
Gentian.....	10 grams.
Chamomile.....	10 grams.
Colchicum root.....	20 grams.
Betony.....	50 grams.

This is made into 365 powders, one of which is taken each day in a full glass of cold or hot water.

605. Powder Willow Bark Compound.

Powdered willow bark, powdered horse-chestnut bark, powdered gentian, powdered calamus, powdered avens root, equal parts.

MIXTURES.**606. Mixture A. C. E.**

Alcohol	1 fl. ounce.
Chloroform	2 fl. ounces.
Ether	3 fl. ounces.

Mix.

The alcohol should be 95 per cent article and the chemicals pure. Other proportions are used but the above is the most common one.

607. Mixture Celery Compound.

Fluid extract of coca.....	2 ounces.
Fluid extract of viburnum.	1 ounce.
Fluid extract of apium graveolens	1 ounce.

608. Mixture Brown, Improved.

One ounce purified extract licorice, 10 ounces dextrin syrup, 1 ounce ammonium chloride, 1 ounce tincture opium camphor, ½ ounce wine antimony, ¼ ounce spirit nitrous ether, and water sufficient to make 16 ounces.

609. Mixture Codeine Compound.

Sulphate of codeine	3 grains.
Solution of sulphate of atropine	12 minims.
Solution of hydrochlorate of strychnine	1 dram.
Syrup of tolu	1½ ounces.
Acid infusion of roses, up to	6 ounces.

Dissolve and mix.

610. Mixture Chlorine.

Chlorine water, 25; simple syrup, 50. Mix.

611. Mixture Chloroform.

Chloroform	40 minims.
Oil of sweet almonds.....	60 minims.
Tragacanth in fine powder	12 grains.
Water enough to make...	2 fl. ounces.

Pour the chloroform into a dry bottle, and add the tragacanth, and shake, add ½ ounce of water. Shake vigorously. Then add the oil in portions, shaking after each addition, and when a perfect emulsion is formed add enough water, in portions, shaking after each addition, to make 2 fluid ounces.

612. Mixture Conium and Iron.

Extract of conium.....	5 drams.
Carbonate of iron.....	10 drams.
Compound tincture of cin-namon	2 fl. ounces.
Oil of cassia.....	18 drops.
Oil of wintergreen.....	20 drops.
Tincture of tolu (2 ounces in 1 pint)	½ fl. ounce.
Sugar	8 ounces.
Water sufficient to make a pint.	

613. Mixture Copaiba.

Dissolve $1\frac{1}{2}$ ounces of copaiba resin in 4 drams of sweet oil of almonds, with gentle heat, add $\frac{1}{2}$ dram solution of potassa, and form an emulsion with $1\frac{1}{2}$ ounces of mucilage of gum arabic, and sufficient water to make 6 ounces. Flavor with 6 drops of oil of cinnamon.

614. Mixture Copaiba.

Resin of copaiba 15 grains.
Compound powder of almonds 30 grains.
Water sufficient to make.. 1 ounce.

Rub the resin with the powder until incorporated; then add the water after the manner of forming an emulsion. A cream-colored emulsion is formed having but a faint odor of copaiba, which may be removed by the addition of compound tincture of lavender. The formula is not liable to separation of the resin on standing.

615. Mixture Copaiba, Guy's Hospital.

Resin of copaiba..... 180 grains.
Alcohol 5 drams.
Spirit of chloroform 1 dram.
Mucilage of acacia 2 ounces.
Water to make 12 ounces.

616. Mixture Copaiba, Keyes'.

Citrate of potassium 2 to 6 drams.
Copaiba 3 to 6 fl. drams.
Fluid extract henbane $\frac{1}{2}$ to 2 fl. drams.
Syrup acacia $1\frac{1}{2}$ fl. drams.
Peppermint water,
q. s. to make..... 3 fl. ounces.

617. Mixture Copaiba, Keyes'.

Balsam copaiba 2 parts.
Spirit juniper 3 parts.
Spirit nitrous ether 1 part.

618. Mixture Copaiba, Keyes'.

Emulsion for injection.
Balsam copaiba 4 parts.
Sodium carbonate cryst.... 2 parts.
Water q. s. to make..... 100 parts.

This emulsion is commonly diluted with 3 parts water when an intravesical injection is made. When excessive pain is present, a few drops of tincture of opium may be added.

619. Mixture Copaiba, Spaackman's.

Mix together 2 drams syrup of gum arabic, $\frac{1}{2}$ ounce balsam copaiba, 24 drops oil of cubebs, 1 ounce syrup of balsam tolu, $\frac{1}{2}$ ounce each of sweet spirits of nitre and compound tincture of opium, 3 drops oil of lavender, and 3 drams compound spirits of lavender. Dose, a tablespoonful three times a day.

620. Mixture Copaiba, Morton's.

Take $\frac{1}{2}$ ounce each of copaiba and powdered cubebs, 2 drams each of acacia and powdered sugar, 7 fluid ounces water and $\frac{1}{2}$ fluid ounce camphorated tincture of opium. Make into a mixture. Dose, a tablespoonful every 3 hours.

621. Mixture, English.

Magnesium sulphate 25
Diluted sulphuric acid..... 3
Distilled water 100
Syrup 25

622. Mixture Guaiacum.

Guaiacum resin, in
powder $\frac{1}{2}$ ounce.
Sugar of milk..... $\frac{1}{2}$ ounce.
Gum arabic, in powder... $\frac{1}{2}$ ounce.
Alcohol 5 fl. drams.
Cinnamon water sufficient to make 1 pint.

623. Mixture Guaiac, Green.

Potassium iodide..... 3 drams.
Tincture guaiac, ammoniated $2\frac{1}{2}$ fl. ounces.
Water 3 fl. ounces.
Extract dulcamara fluid
quantity sufficient, ad. 8 fl. ounces.
Dissolve the iodide of potassium in the water, add the tincture in portions and shake well together until a clear green mixture has been produced, with separation of most of the resin. Then strain and add the fluid extract.

624. Mixture Lieorice Compound.

Mix 4 fluid ounces of glycerine and 2 fluid ounces of extract of licorice, then add 2 fluid ounces of tr. camphorated opium, 1 fluid ounce of wine of antimony, and $\frac{1}{2}$ fluid ounce of spirits of nitrous ether, and finally $6\frac{1}{2}$ fluid ounces of syrup. The mixture is dichromatic, appearing brown and opaque by reflected light, but clear and reddish by transmitted light.

625. Mixture Magnesia Calcined.

Calcined magnesia..... 10 parts.
Distilled water..... 100 parts.
Glycerine 40 parts.
Triturate the magnesia with the water, then add the glycerine.

626. Mixture Magnesium Hydrate.

Magnesium sulphate..... 30 grams.
Distilled water..... 200 grams.
Dissolve, filter, and to the solution, heated to boiling, add sufficient solution of caustic soda under constant stirring to cause a decided alkaline reaction. Wash the precipitate well with hot water upon a strainer, press it and mix it with sufficient cold water to make the mixture weigh 100 grams. It should be preserved and dispensed in dark-colored bottles. It contains 5 per cent anhydrous magnesia.

627. Mixture Magnesium Hydrate.

Magnesia (calcined) is mixed with from 20 to 30 times its weight of distilled water, heated to boiling and maintained at this temperature for 20 minutes. The magma is thrown upon a strainer and allowed to drain, then pressed or dried until it nearly ceases to lose its weight.

628. Milk of Magnesia.

Calcined magnesia, 8 grams; white sugar, 50 grams; water, 40 grams; distilled orange flower water, 25 grams. Triturate the magnesia with the water, heat the mixture under continuous agitation to boiling; take from the fire, add the sugar under continuous stirring, and when cooling down add the orange flower water; finally strain with the help of a spatula.

629. Milk of Magnesia, Glycerinated.

Calcined magnesia..... 10.0
Triturate and mix with
Hot distilled water..... 100.0
Then add
Best glycerine..... 40.0

630. Water of Magnesia.

Sulphate of magnesium..... 50 parts.
Carbonate of sodium crystallized..... 60 parts.
Distilled water, sufficient quantity.
Carbonic acid gas, sufficient quantity.
Dissolve the sulphate of magnesium in 100 parts of water and filter. Also dissolve the carbonate of sodium in 100 parts of water; then pour both solutions, at the same time, in a thin stream, into 4,000 parts of water, which is being constantly stirred, and contained in a capacious vessel. The resulting precipitate (of hydrocarbonate of magnesium) is washed by decantation with distilled water (which should be quite cold) until nitrate of barium ceases to render it turbid. About eight repetitions of the washing process are required. Then mix the residue with enough water to make the whole weigh 1,000 parts. Next pass a stream of carbonic acid gas through the liquid (contained in a suitable vessel), until the precipitated salt is dissolved, and transfer the solution into bottles holding about 6 or 7 ounces, which should be stored in a cool place, lying on their sides.

631. Mixture Oleo-balsamic.

Oil of lavender..... 20 minims.
Oil of marjoram..... 20 minims.
Oil of cloves..... 20 minims.
Oil of mace..... 20 minims.
Oil of cinnamon..... 20 minims.
Oil of cedrat..... 20 minims.
Oil of rue..... 10 drops.
Balsam of Peru..... 30 grains.
Alcohol 10 fl. ounces.
Macerate in a cold place and filter.

632. Mixture Oleo-balsamic.

Oil of lavender..... 30 minims.
Oil of cloves..... 25 minims.
Oil of cinnamon..... 25 minims.
Oil of thyme..... 30 minims.
Oil of lemon..... 30 minims.
Oil of mace..... 30 minims.
Oil of orange flower.... 30 minims.
Balsam of Peru..... 80 minims.
Alcohol, enough to make 16 fl. ounces.
Dissolve the oils and balsam in the alcohol, let the solution stand for a few days and filter.

633. Mixture Sulphate of Quinia and Coffee.

Strong infusion of coffee 5 fl. ounces.
Sulphate of quinia..... 24 grains.
Sugar 4 drams.

634. Mixture Senna Compound.

Senna leaves, bruised.... 2 ounces.
Cloves, bruised..... 2 drams.
Extract licorice, cut in
thin slices..... 3½ ounces.
Water 2 pints
Macerate in a covered vessel for 12 hours, occasionally stirring the mixture in the meantime; then strain and add
Sulphate of magnesium..... 10 ounces.
Syrup of buckthorn..... 1 ounce.
Compound spirits of ammonia ½ ounce.
Compound tincture of senna..... 2 ounces.

635. Mixture Turpentine.

Turpentine 2 drams.
Ether 1½ drams.
Syrup orange..... 1½ ounces.
Simple syrup..... 2 ounces.
Water, to make..... 6 ounces.

LINIMENTS.

636. Liniment A. B. C.

Camphor ½ ounce.
Chloroform 2½ fl. ounces.
Liniment of aconite..... 5 fl. ounces.
Liniment of belladonna.. 5 fl. ounces.
Glycerine 2 fl. ounces.

637. Liniment Acid Carbolie.

Dissolve carbolic acid, 1 part, in olive oil, 100 parts.

638. Liniment Ammonium Iodide.

Iodide of ammonium..... 2 grains.
Camphor,
Oil of lavender, of each..... 1 dram.
Water of ammonia..... 4 ounces.
Alcohol sufficient to make 1 pint.

639. Liniment Ammonium Iodide.

Water of ammonia..... 3 fl. ounces.
 Glycerine (or soap liniment) 2 fl. ounces.
 Tincture of iodine..... 8 fl. ounces.
 Alcohol, quantity sufficient.

Mix the soap liniment (or glycerine) with the tincture of iodine and 4 fluid ounces of alcohol and the ammonia water; shake, and make to 1 pint with alcohol.

640. Capsicum Liniment Compound.

Tincture of capsicum,
 see below..... 523 parts.
 Camphor 30 parts.
 Oil of rosemary..... 10 parts.
 Oil of lavender..... 10 parts.
 Oil of thyme..... 10 parts.
 Oil of cloves..... 10 parts.
 Oil of cinnamon..... 2 parts.
 Water of ammonia..... 300 parts.
 Olive oil soap..... 3 parts.
 Burnt sugar..... 5 parts.
 Water 97 parts.

Dissolve the camphor and oils in the tincture, and mix this with the water of ammonia. Then dissolve the soap and sugar in the water, and mix the whole together.

Note—The tincture of capsicum is directed to be prepared by macerating powdered capsicum, during 8 days, with 3 times its weight of alcohol of specific gravity 0.834, and filtering.

641. Oil Hyoscyamus Compound (Balsamum Tranquillous).

Oil hyoscyamus, infused..... 100
 Oil wormwood,
 Oil lavender,
 Oil rosemary,
 Oil sage,
 Oil thyme, of each..... 2 drops.

642. Liniment Krampf.

Tincture opium,
 Spirit ammonia,
 Hoffman's balsam of life,
 (Tincture benzoin co.)
 of each..... 10.0
 Infused oil hyoscyamus..... 90.

643. Linimentum Naphthol.

One part of naphthol with 100 parts of a fat oil like almond, olive or cod-liver oil.

644. Liniment Potassium Iodide.

Hard soap, cut small,
 Iodide of potassium,
 each 1½ ounces.
 Glycerine 1 fl. ounce.
 Oil of lemon..... 1 fl. dram.
 Distilled water..... 10 fl. ounces.

Dissolve the soap in 7 ounces, and the glycerine and iodide in the remaining water, mix the solutions, and add the oil of lemon.

645. Liniment Soap.

Castile soap..... 4 troy ounces.
 Water 14 fl. ounces.
 Camphor 2 troy ounces.
 Oil rosemary..... ½ fl. ounce.
 Strong alcohol 1½ pints.

The water is mixed with ½ pint of alcohol and poured upon the soap, which, by occasional agitation, will dissolve in a short time. A solution of the camphor and oil in the remaining alcohol is then added and the preparation filtered.

646. Liniment Soap Ammoniacal.

Soap in shavings..... 1 part.
 Water 30 parts.
 Alcohol 10 parts.
 Water of ammonia..... 15 parts.

Digest the soap with the water until dissolved; then add the alcohol and ammonia.

647. Liniment Soap, Improved.

Dissolve camphor 2 ounces in 2 pints alcohol; add oleic acid 2 ounces and oil of rosemary ½ fluid ounce; then gradually add sodium bicarbonate 5 drams, and when effervescence has ceased add water 6 fluid ounces and filter. It will not deposit in cold weather.

648. Liniment Stillingia.

Oil of stillingia..... 1 fl. ounce.
 Oil of cajuput ½ fl. ounce.
 Oil of lobelia..... 2 drams.
 Alcohol 2 fl. ounces.

649. Thio Opodeldoc.

Seventy dialyzed stearin soap and 20 dialyzed olein soap are dissolved with heat in 850 alcohol (90 per cent), 20 oil of lavender added, filtered, and the filtrate diluted to 900 by addition of alcohol. Mix in a warm capsule 50 each of liquid thiol and distilled water, pour this slowly into the soap solution, add 25 ether, and pour into containers.

650. Chloral With Camphor.

Rub together 1 ounce each of camphor and hydrate of chloral in a warm mortar until completely liquefied, and filter if necessary.

651. Chloral Camphor Cantharidated.

Forty parts camphor are powdered with a few drops alcohol and mixed with 60 parts of chloral hydrate; 20 parts of powdered cantharides are heated for 1 hour in a water bath at 140 degrees F. with the chloral camphor, shaking once in a while, and the mixture is strained through cloth. It is best applied by slightly moistening a piece of linen or cotton and keeping it in contact with the skin with strips of adhesive plaster.

GAUZES, COTTONS, COLLOIDIONS, ETC.

652. Cotton Absorbent.

One kilogram cotton is boiled for half an hour in 4 litres of water, containing 25 grams caustic potassa, and then well washed till every trace of alkali has been removed. It is squeezed quite dry and put for 15 to 20 minutes in a 5 per cent solution of chlorinated lime. After washing with a little water (not too much), the cotton is dipped into water acidulated with muriatic acid (about 30 grams diluted muriatic acid to 4 litres of water), rinsed in fresh water, and boiled again in alkaline water of the above mentioned strength. After washing it is dipped into the acid solution, and rinsed perfectly.

653. Cotton Analgesic.

Solution of cocaine (3 per cent) 30 grams.
Morphine sulphate 0.8 gram.
Absorbent cotton 30 grams.

Dissolve the morphine in the cocaine and soak the cotton in the solution.

654. Cotton Salicylated.

Glycerine 2 parts.
Water 100 parts.
Alcohol 20 parts.
Salicylic acid 2 parts.
Absorbent cotton 20 parts.

655. Cotton Sublimated.

Mercuric chloride..... 35 grains.
Ammonium chloride..... 35 grains.
Alcohol 1 pint.
Boiled water..... 4 pints.
Absorbent cotton..... 1 pound av.

Dissolve the sublimate in the alcohol, add the boiled water, containing the ammonium chloride, immerse the cotton, kneading thoroughly, so as to have the antiseptic solution uniformly distributed through it, and so that none of the liquid be left. Dry. It contains one-half of 1 per cent of mercuric chloride.

656. Canton Flannel Absorbent.

Boil the canton flannel $1\frac{1}{2}$ to 2 hours in a 3 per cent solution of caustic soda, then wash in several portions of pure water, treat 10 or 15 minutes with water containing $1\frac{1}{2}$ per cent of hydrochloric acid, to remove any remaining soda, and finally wash repeatedly in abundance of pure water.

657. Gut Antiseptic.

Macerate commercial gut in stronger ether for 24 hours. Remove, place in a 1-1,000 mercuric chloride solution, one-fifth part, by weight of which is alcohol, the rest water, and macerate for 30 minutes;

remove, cut into pieces of three or six feet each, dry and place in oil of juniper, to macerate for ten days, after which time it is ready for use, or may be kept indefinitely. To use, remove, wipe off adhering oil with an antiseptic towel, or, better, wash with benzine, dry and keep in a 1-1,000 mercuric chloride solution.

658. Catgut Cromielized.

Place the catgut in ether for 48 hours; then immerse in the following for 48 hours and put in antiseptic, dry, tight-closed vessels:

Acid chromic..... 1 grain.
Acid carbolic..... 200 grains.
Alcohol 2 drams.
Distilled water..... 22 drams.

Soak in carbolic, 1-20, before using.

659. Gauze Antiseptic.

Two hundred parts of Burgundy pitch and 100 parts of stearin are dissolved in 2,000 parts of alcohol, and 180 parts of carbolic acid added. This quantity, in grams, is sufficient to impregnate 80 meters (87 yards) of gauze. The latter is first laid into square piles, pressed into a zinc trough, heated for several hours in a steam bath, and then impregnated with the mixture. After having remained a few hours longer in the warm trough, it is pressed. A few minutes' exposure to the air is sufficient to dry it enough to enable it to be rolled and wrapped in parchment paper.

660. Gauze Iodoform.

Ether 22 ounces.
Rectified benzine..... 16 ounces.
Sterilized vaseline oil.... $2\frac{1}{2}$ drams.
Elemi resin..... 75 grains.
Iodoform $12\frac{1}{2}$ drams.

Mix the liquids, and in the mixture dissolve the elemi; strain or filter, and in the clear liquid dissolve the iodoform by agitation.

661. Gauze Iodoform.

Iodoform 5 ounces av.
Petroleum benzine..... 18 pints.
Purified gauze..... 10 ounces av.
(about 54 yds.)

Dissolve the iodoform in the benzine, hang the gauze upon an antiseptic clothes line; in a clean, dry room, remove from fire, then saturate the gauze with the benzine solution. When dry, moisten with a mixture of alcohol (2 parts) and glycerine (1 part); cut it into 3-yard pieces. After the alcohol has largely evaporated, wrap in paraffin paper with antiseptically clean hands, and keep in a closed container, having in it an open salt-mouth bottle containing water (to keep it moist). The finished product contains 5 per cent of iodoform.

662. Gauze Iodol.

Iodol	1.0
Resin	1.0
Glycerine	1.0
Alcohol	10.0

663. Gauze Sublimated.

Mercuric chloride.....	21½ grains.
Ammonium chloride.....	21½ grains.
Boiled water.....	6 pints.
Purified gauze.....	100 ounces av. (about 54 yds.).

Dissolve the chlorides in the water, immerse the gauze previously cut into pieces of 3 yards ("short") or 6 yards ("long"), each, in length. Express moderately, or so that no liquid shall be left. Dry in a clean, dry room, upon an antiseptic clothes-line. Remove, wrap in paraffin paper, and keep in a well closed container. The product contains one-twentieth of one per cent of mercuric chloride.

664. Collodion Cantharidal, Improved.

Cantharidin	1 part.
Castor oil	40 parts.
Aceton	40 parts.
Strongest collodion.....	900 parts.

Rub up the cantharidin in the oil, heating carefully to hasten solution. Let cool, and add the aceton, and finally incorporate the collodion. If desired the preparation may be colored by the addition of 10 parts tincture of hemp.

665. Collodion Cantharidal.

Pyroxylin	10 parts.
Ether	200 parts.
Alcohol	35 parts.
Castor oil	5 parts.
Cantharidin	1 part.

666. Collodion Morphine.

Hydrochlorate of morphine..	1 part.
Collodion	20 parts.

667. Collodion Corrosive Sublimate.

Collodion	1 fl. ounce.
Palm oil.....	10 grains.
Alkanet to color.	

The above is then used in the following manner:

Corrosive sublimate.....	1 dram.
Prepared collodion.....	1 fl. ounce.

668. Collodion, Instantaneous.

Mix the ether with the gun cotton and shake until thoroughly saturated and then add the alcohol. The solution will be instantaneous if the chemicals are all of good quality.

669. Collodion Styptic, Parosi's.

Collodion	13 fl. ounces
Phenol	1 troy ounce.
Tannin	5 drams.
Benzole acid.....	3 drams.

DIGESTIVE FERMENTS.**670. Pepsin.**

The stomachs are macerated with acidulated water, the solution resulting is clarified by addition of sulphurous acid, the clear liquid removed from the precipitate, the pepsin separated from the peptone by saturating at a higher temperature with sodium sulphate, the pepsin being deposited and the peptone remaining dissolved. The precipitated pepsin is dissolved in weak hydrochloric acid and sodium sulphate, is removed from the solution by dialysis, and the residual liquid concentrated and dried. From the liquid out of which the pepsin is deposited the sodium sulphate is separated from the peptone by recrystallization on cooling. The product is readily soluble, free from peptone, non-hygroscopic, permanent, and one grain capable of dissolving 10,000 grains of egg albumen.

671. Pepsin.

Take fresh rennets (stomachs) of hogs, calves, sheep or cattle; clean with cold water, macerate from 50 to 60 hours in water well acidulated with hydrochloric acid, at a temperature not exceeding 50 degrees F. Remove the rennets from the solution, strain solution through cotton flannel, add common salt in the proportion of about 1½ pounds to the gallon of solution, mix, allow to rest fifteen to thirty minutes. Draw off the clear liquid and throw the scum formed upon cotton strainers and drain. Next dissolve the scum in the smallest quantity of water acidulated with hydrochloric acid, filter, add two pints alcohol to every pint of pepsin solution. When a precipitate has formed throw the whole upon white filtering paper, allow to drain, washing repeatedly with diluted alcohol. Dry the mass in a cool dry place—free from dust and vapor. The dried mass can easily be passed through a fine brass sieve.

672. Pepsin Liquid Aromatic.

Saccharated pepsin.....	320 grains.
Oil of cinnamon.....	2 minims.
Oil of pimento.....	2 minims.
Oil of cloves.....	4 minims.
Hydrochloric acid.....	75 minims.
Alcohol	½ ounce.
Glycerine	6 ounces.
Water, a sufficient quantity to make.....	16 ounces.

Dissolve the oils in the alcohol, triturate this with the pepsin in a mortar, and gradually add the acid, glycerine and water..

673. Cordial Pepsin.

Pepsin 32 grains.
 Diluted hydrochloric acid.. 1 dram.
 Simple syrup..... 2 ounces.
 Sherry wine..... 1 ounce.
 Water, sufficient to make.. 4 ounces.

674. Elixir Pepsin Compound.

Wine pepsin..... 100.0
 Aromatic tincture..... 3.0
 Bitter tincture..... 5.0
 Vinous tincture rhubarb..... 10.0
 Syrup orange peel..... 50.0

675. Essence Pepsin.

Pepsin 4 drams.
 Aromatic elixir (N. F.).... 4 ounces.
 Sherry wine 4 ounces.
 Glycerine 2 ounces.
 Water, enough to make.... 1 pint.

676. Essence Pepsin.

Pepsin (scales) 120 grains.
 Glycerine 1 fl. ounce.
 Elixir taraxacum com-
 pound 1 fl. ounce.
 Alcohol 2 fl. ounces.
 Oil cloves 1 drop
 Syrup 2 fl. ounces.
 Dilute hydrochloric acid. 1 fl. dram.
 Water to make..... 16 fl. ounces.

677. Essence Pepsin.

Scale (or granulated)
 pepsin 1 ounce.
 Cinnamon water 2 fl. ounces.
 Caraway water 4 fl. ounces.
 Hydrochloric acid 1 fl. dram.
 Elixir calisaya 2 fl. ounces.
 Glycerine 16 fl. ounces.
 Distilled water enough
 to make 4 pints.

Dissolve the pepsin in the water, previously mixed with the hydrochloric acid, add the elixir calisaya, allow to stand 24 hours, then filter, add glycerine, and lastly sufficient distilled water to bring the bulk up to $\frac{1}{2}$ gallon.

678. Essence Pepsin.

Fresh calves' rennet.. 4 troy ounces.
 Glycerine 4 fl. ounces.
 Alcohol 2 fl. ounces.
 Tincture of fresh or-
 ange peel 2 fl. drams.
 Water 14 fl. ounces.
 Purified talcum 1 troy ounce.

Mix the rennet and glycerine, then add the alcohol, water and tincture of orange, and macerate for 4 or 5 days, with repeated agitation. Add the talcum, agitate and allow to stand for an hour or until the talcum has been largely deposited. Now decant

on a muslin or flannel filter, the supernatant liquid first, and finally the dregs. Then filter again through paper. One fluid dram of the essence with 4 fluid ounces of water acidulated with hydrochloric acid will easily digest 300 grains of egg albumen in 4 hours at 104 F., and 1 fluid dram will curd 1 quart of milk at 100 F., in 4 minutes.

679. Essence Pepsin.

Pepsin 128 grains.
 Glycerine 4 ounces.
 Muriatic acid dilute..... 75 minims.
 Alcohol 3 ounces.
 Water to make..... 1 pint.

680. Wine Pepsin.

Mix thoroughly in a large flask 24 parts of pepsin, 20 parts of water and 3 parts of hydrochloric acid. Macerate 6 days, then add 839 parts of sherry wine, 2 parts tincture of orange peel, and set aside for a few days. Then filter, and make the measure up to 1,000 parts by distilled water.

681. Wine Pepsin.

Pepsin, soluble scales.. 320 grains.
 Distilled water 3 troy ounces.
 Glycerine 2 troy ounces.
 Strong hydrochloric
 acid 2 drams.
 Sherry wine, detanna-
 ted, sufficient to make 20 fl. ounces.

682. Wine Pepsin.

White gelatin, in strips.. 15 grains.
 Distilled water $2\frac{1}{2}$ drams.
 White wine 25 ounces.

Dissolve the gelatin in the water by the aid of heat, and then add the sherry wine. Shake well and set aside for some time.

Pepsin 7 drams.
 Glycerine 6 drams.
 Distilled water 6 drams.

Mix together, and when both mixtures have stood for a sufficient time, mix them with 40 minims of hydrochloric acid; macerate for 8 days, shaking occasionally; then filter.

683. Wine Pepsin.

The following formula, it is said, produces a wine that will preserve its efficacy even in bottles that are kept open:

Pepsin 24 parts.
 Glycerine 20 parts.
 Water 20 parts.
 Hydrochloric acid 3 parts.

Mix thoroughly in a large flask, and let macerate for 6 days; then add 839 parts sherry wine and 2 parts tincture of orange peel, and set aside for 2 days. Finally filter, and bring the filtrate up to 1,000 parts by the addition of distilled water.

684. Wine Pepsin Aromatic.

Saccharated pepsin	1 dram.
Water	4 drams.
Glycerine	4 drams.
Muriatic acid	2 drams.
Aromatic tincture	3 drams.
White wine (light sherry)...	2 pints.

Mix the pepsin, glycerine and water, and shake several times. Then add the wine, muriatic acid and aromatic tincture. Let stand for several days (shaking occasionally) and filter.

685. Pancreas Extract Aqueous.

Aqueous pancreas extract is prepared from the freshly prepared parts by adding $\frac{1}{2}$ pint of water warmed to 36 degrees C. (86 degrees F.), for every pancreas, together with a little common salt, and setting aside for 5 or 6 hours, when the mixture is drained on a hair sieve without pressure. The liquid also must be used fresh, and, while less active than paste, is in some cases preferable.

686. Pancreas, Powdered.

Powdered pancreas is readily obtained by reducing the paste in a vacuum apparatus at a temperature of 40 degrees C. (104 degrees F.) to an extract, treating this about 48 hours with absolute alcohol, allowing the latter to drain off, and evaporating the adhering portion at a temperature not exceeding 40 degrees C. The light brown, coarse powder so obtained is very hygroscopic, and must, therefore, be carefully preserved from dampness. It may be administered in wafers, or in food or water.

Since pancreatic ferments become inert when exposed to a temperature exceeding 45 degrees C. (113 degrees F.), the particular food to which any of the above preparations are to be added must have a temperature below that named.

687. Elixir Pancreatin.

Pancreas	No. 6.
Hydrochloric acid.....	4 fl. ounces.
Glycerine	q. s.
Water	$1\frac{1}{2}$ gal.

Macerate the dissected pancreas three days in a mixture of the water, the acid, and $2\frac{1}{2}$ pints of glycerine; then separate the liquid, strain, and add $2\frac{1}{2}$ fluid drams of oil of orange and a sufficient quantity of glycerine to make the liquor measure $2\frac{1}{2}$ gallons; it is then filtered and forms a sweet acidulous liquid, 1 fluid dram of which will readily emulsify half a fluid ounce of cod-liver oil.

688. Solution Pancreatic.

Pancreas	No. 6.
Hydrochloric acid.....	4 fl. ounces.
Glycerine	q. s.
Water	12 pints.
Oil of sweet orange.....	$2\frac{1}{2}$ fl. drams.

Macerate the cutup pancreas for 3 days

in the mixture of acid and water, with $2\frac{1}{2}$ pints of glycerine added; strain and add the oil of orange, and make up to 30 pints with glycerine. Filter. One fluid dram emulsifies 4 fluid drams of cod-liver oil.

689. Solution Pancreatic.

Pancreatin.....	600 grains.
Glycerine	6 fl. ounces.
Orange flower water....	10 fl. ounces.

Filter.

690. Essence Rennet.

Take one calf's stomach, cut into 20 pieces, and rub with 6 ounces of salt. Let it stand over night, then digest in 36 ounces of water for at least one week—but it may stand for a month or two—then strain, and to the strained liquor add the following.

Oil of pimento.....	12 drops.
Oil of bitter almonds.....	12 drops.
Oil of nutmeg.....	12 drops.
Oil of cloves.....	12 drops.
Oil of lemon.....	12 drops.
Rectified spirit.....	4 ounces.

Filter through lampblack.

This essence has kept good for three years. A tablespoonful of it is sufficient for a quart of junket.

691. Liquid Rennet.

Well-dried rennets—preferably 3 months old—are cut into shreds, rejecting the smooth portions. To 100 grams of the shredded rennet use 1 liter of water; 50 grams common salt, and 40 grams boracic acid, and shake frequently for several days, keeping it at the ordinary temperature; 50 grams more of the salt are then added, and the mixture thrown upon a large filter, about 1 liter passing through a double filter, the full size of the sheet, in two days. For 1 liter of water used, about 800 cubic centimeters of liquid rennet is thus obtainable, which, when brought to the measure of 1,000 cubic centimeters, with a 20 per cent solution of common salt (1 liter), will be of such strength that 1 part will coagulate 10,000 parts of milk, and will keep well. The filters becoming stopped up rapidly, they cannot be used for the filtration of more than $1\frac{1}{2}$ liters. The small quantity of boracic acid introduced into the milk does not in any way interfere with the manufacture of cheese. Alcohol may be substituted for boracic acid, but, in this event, the liquid rennet must be kept in well-closed bottles. The rennets are extracted with a 10 per cent solution of common salt, in the manner above stated; after five days, 9 per cent (by volume) of alcohol is added, and the liquid filtered. The preparation keeps in well-closed bottles for a long time and has about the same strength (i. e. 1:10,000) as that prepared with boracic acid.

692. Diastase.

Macerate 10 pounds of ground pale malt, 350 grains of bicarbonate of sodium and 12 to 14 pints of water for two hours at 104 degrees F., draw off the fluid, add 6 to 8 pints more of water, draw off the second fluid after a time, unite the 2 fluids; heat to 149 degrees F., and strain while hot. To this fluid add twice its volume of strong alcohol, allow the precipitate to subside, draw off the supernatant fluid, re-dissolve the precipitate in a little warm distilled water, and, after filtering or straining, reprecipitate with alcohol. The diastase thus purified is dried on a plate at 122 degrees F., and powdered. The yield is 1 to 1½ per cent. It is important to remove the impurities (matter insoluble or sparingly soluble in water) as speedily as possible, since they consist of very putrescible substances.

693. Diastase.

Two pounds of the best malt are allowed to stand soaked in 10 per cent alcohol for eight hours, after which time it is pressed and filtered. The perfectly bright filtrate is then precipitated by alcohol till a milkiness ensues. It is then allowed to stand some time, decanted or filtered, and the precipitate washed once or twice with absolute alcohol. The precipitate is then treated with cold water, filtered from the insoluble matter, and reprecipitated by alcohol. By repeating this treatment once or twice, and drying over phosphoric acid in vacuo, a white, easily soluble powder of high activity is produced.

TROCHES, LOZENGES, PASTILLES, TABLETS.

694. Troches Cocaine.

Cocaine muriate..... 10 grains.
 Vanillin 2 grains.
 Powdered tragacanth.. 20 grains.
 Pure sugar..... 4 troy ounces.
 Alcohol 15 minims.
 Water 3 fl. drams.
 Divide into 128 troches.

695. Troches Cubeb.

Cubeb, in powder..... 200 grains.
 Extract licorice..... 1,225 grains.
 Tragacanth, in powder.. 70 grains.
 Refined sugar..... 200 grains.
 Black currant paste, a sufficiency.
 Prepare and divide into 350 lozenges.
 (Said to closely resemble Brown's.)

696. Troches Hydrastin.

Eucalyptol 30 minims.
 Oil cubeb..... 30 minims.
 Hydrastin 30 grains.
 Cocaine hydrochlorate.... 5 grains.
 Powdered sugar..... 1 ounce.
 Powdered extract licorice 2 ounces.
 Powdered tragacanth.... 200 grains.
 Syrup tolu enough to make a mass,
 which form into 100 troches.

697. Troches Pepsin.

Pepsin 10.0
 Sugar 80.0
 Tragacanth 3.0
 Glycerine 5.0
 Water, quantity sufficient.
 Make into 100 troches.

698. Troches Potassium Chlorate.

Potassium chlorate..... 4 pounds.
 Powdered sugar..... 16 pounds.
 Vanillin 16 grains.
 Mucilage of acacia, quantity sufficient.
 Make a mass and divide into lozenges of 25 grains each. The mass remains beautifully white and has a prominent and agreeable taste of vanilla.

699. Lozenges Acid Benzoic.

Benzoic acid..... 360 grains.
 Pulverized refined sugar.. 25 ounces.
 Gum acacia, in powder.. 1 ounce.
 Mucilage gum acacia..... 2 fl. ounces.
 Sufficient distilled water.
 Mix the benzoic acid, sugar, and gum, and add the mucilage and enough water to form a proper mass. Divide into 720 lozenges, and dry them in a hot chamber at a moderate temperature.

700. Lozenges Ammonium Chloride.

Chloride of ammonium..... 10.0
 Powdered extract of licorice..... 80.0
 Powdered sugar..... 30.0
 Powdered tragacanth..... 2.0
 Glycerine 5.0
 Water sufficient.
 To be made into tablets. The surfaces may be coated with pure silver foil before cutting the lozenges.

701. Lozenges Aperient.

Sulphur 5 grains.
 Cream of tartar 1 grain.
 Extract of ipecac.... 1-100 grain.
 Extract of capsicum 1-1,000 grain.
 Calcium bisulphite .. 1-8 grain.
 Sugar 8 grains.
 Make one lozenge.

702. Lozenges Bismuth.

Subnitrate bismuth1,440 grains.
 Pulverized refined sugar. 29 ounces.
 Precipitated carbonate of
 calcium 6 ounces.
 Carbonate magnesium .. 4 ounces.
 Gum acacia, in powder.. 1 ounce.
 Mucilage gum acacia.... 2 fl. ounces.
 Sufficient rose water.

Mix the dry ingredients, then add the mucilage, and form the lot into a proper mass with rose water. Divide it into 720 lozenges, and dry at a moderate temperature. Each lozenge contains 2 grains of subnitrate of bismuth.

703. Lozenges Charcoal.

Icing sugar 12 pounds.
 Ground purified charcoal.. 2 pounds.
 Tincture ginger flavoring and melted gum.

The sugar and charcoal are mixed, the flavor added and the whole made into stiff, smooth paste with sufficient melted gum. The paste must be molded well to make it plastic and tenacious. Dust the slab with a mixture of icing sugar and powdered starch. This is then rolled into sheets of the desired thickness and cut into lozenges.

704. Tablets Lemon Charcoal.

Dutch crushed sugar..... 7 pounds.
 Powdered charcoal 4 ounces.
 Cream of tartar ¼ ounce.
 Water 1 quart.
 Jetoline black.
 Vanilla flavoring.

Melt the sugar in the water and bring to a sharp boil. Put in the cream of tartar and then continue the boiling up to a strong crack degree. Pour out the mass on an oiled slab; cut the batch into two equal portions, and flavor each with vanilla. Mold the charcoal and sufficient jetoline black in one-half of the sugar, add a touch of blue to the other piece, and pull it over the hook until it is of a glossy whiteness.

705. Lozenges, Cough.

Icing sugar 56 pounds.
 Block juice 3 pounds.
 Glucose 7 pounds.
 Gelatin (weight dry) 20 ounces.
 Cayenne, cinnamon and anise seed.

Soak the gelatin 12 hours in sufficient water to cover it. Sift the sugar on the slab and make a bay. Dissolve glucose by bringing it just to a boil, and remove the pan from the fire. Stir the gelatin into the glucose, and add the block juice (perfectly melted). These are then well mixed, the flavor added and incorporated,

and the whole made into a stiff paste. The whole is then rolled out into sheets and cut in lozenges in desired shape. Lay in trays and dry in oven.

706. Lozenges, Cough.

Fluid extract senega ... ½ ounce.
 Fluid extract squills.... 1½ ounces.
 Fluid extract ipecac..... ¼ ounce.
 Fluid extract horehound. 1 ounce.
 Tincture of tolu..... 1 ounce.
 Paregoric 1 ounce.
 Oil of anise 25 drops.
 Oil of wintergreen 8 drops.
 Oil of sassafras 15 drops.
 Sugar 12 pounds.

707. Cough Drops.

Powdered extract of licorice 1 pound.
 Powdered sugar 1½ pounds.
 Powdered cubebs ¼ pound.
 Powdered gum arabic ¼ pound.
 Extract of conium 1 pound.

708. Cough Drops.

Fluid extract of horehound. 1 pound.
 Fluid extract boneset 1 pound.
 Fluid extract wild cherry.. 1 pound.
 Fluid extract catnip..... 1 pound.
 Fluid extract elecampane... 1 pound.
 Morphine sulphate 1 dram.
 Oil of lemon 2 ounces.
 Cut with alcohol 8 ounces.
 Water sufficient to dissolve the morphine.

These quantities are sufficient for about 6 pounds of mixture, which, when manufactured, is to be added to 100 pounds of sugar.

709. Cough Drops.

Dutch crushed sugar 9 pounds.
 Brown sugar 5 pounds.
 Licorice paste 1½ pounds.
 Extract of poppies 2½ ounces.
 Tartaric acid 1½ ounces.
 Ipecacuanha 1 ounce.
 Tincture of tolu 1 ounce.
 Oil of anise seed ½ ounce.
 Cream of tartar ½ ounce.
 Water 1 quart.
 Lemon flavoring.

Method. Melt the sugars in the water and bring them to a sharp boil. Add the cream of tartar and continue to boil up to strong crack degree. Pour in the extract of poppies, let it boil well in; then pour the batch on an oiled slab, spread the licorice paste on the sugar, and add the remainder of the flavoring ingredients. Work all thoroughly into the sugar, pass it through the tablet rollers, and when cold sift icing sugar with the goods.

710. Cough Drops.

Dutch crushed sugar 10 pounds.
 Brown sugar 4 pounds.
 Licorice paste 1 pound.
 Cream of tartar ½ ounce.
 Tincture of capsicum ½ ounce.
 Oil of anise seed ¼ ounce.
 Water 2 quarts.
 Lemon flavoring.

Method: When the sugar has been melted in the water bring the solution to a sharp boil. Add the cream of tartar and continue the boiling up to a strong crack degree. Pour the mass out on an oiled slab, spread the licorice on the sugar, and add the flavoring, capsicum and aniseed. Work these thoroughly into the batch and then pass it through the small tablet rollers.

711. Cough Drops.

Dutch crushed sugar 8 pounds.
 Brown sugar 6 pounds.
 Glucose 2 pounds.
 Licorice paste 1½ pounds.
 Tartaric acid 1½ ounces.
 Paregoric 1 ounce.
 Tincture of tolu ½ ounce.
 Oil of aniseed ¼ ounce.
 Water 2 quarts.

Method: Dissolve the sugars in the water and bring them to a sharp boil. Stir in the glucose and continue to boil until crack degree is reached. Pour the mass out on an oiled slab; spread the licorice paste on it, turn the edges of the sheet, add the acid and the remaining ingredients. Work all thoroughly into the sugar, and then pass it through the acid tablet rollers.

712. Lozenges Digerentia.

Lactophosphate of lime.... 1 grain.
 Lactophosphate of magnesia ⅓ grain.
 Lactophosphate of iron.... 1-16 grain.
 Pepsin 1 grain.
 Diastase 1 grain.
 Tincture of musk..... 1 minim.
 Glucose, quantity sufficient.

713. Lozenges Ipecacuanha.

Ipecacuanha, in powder.. 180 grains.
 Pulverized refined sugar.. 25 ounces.
 Gum acacia, in powder... 1 ounce.
 Mucilage gum arabic..... 2 fl. ounces.
 Sufficient distilled water.

Mix the powders, and add the mucilage and water to form a proper consistency.

Divide into 720 lozenges, and dry in a moderate heat. Each lozenge contains ¼ grain of ipecac.

714. Lozenges, Opium.

Extract opium..... 72 grains.
 Pulverized refined sugar.... 16 ounces.
 Extract licorice..... 6 ounces.
 Gum acacia, in powder.... 2 ounces.
 Tincture tolu..... ½ fl. ounce.
 Sufficient distilled water.

Add the extract of opium, first softened by means of a little water, and the tincture of tolu to the extract of licorice, previously heated in a water bath. When the mixture is reduced to a proper consistency, remove it to a slab, add the sugar and gum, previously rubbed together, and mix thoroughly. Divide the mass into 720 lozenges, and dry in a moderate temperature.

Each lozenge contains 1-10 of a grain of extract of opium, or 1-50 of a grain of morphine.

715. Lozenges, Reduced Iron.

Reduced iron..... 720 grains.
 Pulverized refined sugar. 25 ounces.
 Gum acacia, powdered.... 1 ounce.
 Mucilage gum acacia..... 2 fl. ounces.
 Sufficient distilled water.

Mix the iron, sugar and gum and add the mucilage and sufficient water to make a proper mass.

Divide into 720 lozenges, and dry. Each lozenge contains 1 grain of reduced iron.

716. Lozenges Santonin.

Santonin 720 grains.
 Pulverized refined sugar. 25 ounces.
 Mucilage gum acacia..... 2 fl. ounces.
 Gum acacia, in powder... 1 ounce.
 Sufficient distilled water.

Mix the santonin, sugar and gum; add the mucilage and water to form a proper mass. Divide into 720 lozenges, and dry them in a moderate temperature. Each lozenge contains 1 grain of santonin.

717. Lozenges, Slippery Elm.

Slippery elm bark, cut.... 4 ounces.
 Water, sufficient, or..... 12 ounces.
 Sugar, in very fine powder. 2 pounds.
 Oil of anise or wintergreen 20 drops.

Macerate the bark in the cold water for about twenty-four hours; strain the liquor and evaporate it, at a gentle heat, to 4 ounces. To this, when cold, add enough finely powdered sugar to form a mass of the proper consistency; the quantity required will not be very far from two pounds. Lastly mix in the flavoring material and divide the mass into troches weighing from ten to fifteen grains each.

718. Lozenges Sodium Bicarbonate.

Bicarbonate sodium, in powder 3,000 grains.
 Pulverized refined sugar 25 ounces.
 Mucilage gum acacia.. 2 fl. ounces.
 Gum acacia, in powder 1 ounce.
 Sufficient distilled water.

Mix the powders, and add the mucilage to form a proper mass. Divide into 720 lozenges, and dry them in a moderate temperature. Each lozenge contains 5 grains of bicarbonate of sodium.

719. Lozenges, Sulphur.

Precipitated sulphur and one-fifth the weight of cream tartar are made into a mass with sugar, gum acacia and mucilage, and flavored with tincture of orange peel. Each lozenge contains 5 grains of sulphur, and the dose is given as one to six.

720. Lozenge, Voice.

Cubebs $\frac{1}{2}$ grain.
 Benzoic acid..... $\frac{1}{3}$ grain.
 Hydrochlorate of cocaine. 1-70 grain.
 Powdered tragacanth..... $\frac{1}{4}$ grain.
 Extract licorice..... 5 grains.
 Sugar 13 grains.
 Eucalyptol $\frac{1}{4}$ minim.
 Oil of anise..... 1-20 minim.
 Black currant paste, quantity sufficient to make 20 grains.

For ordinary hoarseness of singers and speakers, dissolve a small piece in the mouth just before vocal exertion.

721. Pastilles for Fetid Breath.

Coffee, roasted and powdered 3 ounces.
 Charcoal, powdered..... 1 ounce.
 Boric acid..... 1 ounce.
 Saccharin 10 grains.
 Tincture of vanilla, sufficient quantity.

Mucilage acacia, sufficient quantity.

Reduce the solids to a moderately fine, uniform powder, flavor with the tincture and then with enough mucilage to make a mass, which is to be divided into troches or pastilles, each weighing 10 grains.

722. Pastilles Guarana.

Powdered guarana..... 100.0
 Powdered sugar..... 200.0
 Vanilla sugar..... 5.0
 Cacao 700.0

Mix, and with a gentle heat make a mass, which divide into 1,000 pastilles.

723. Pastilles, Migraine.

Phenacetin 30 centigrams.
 Caffeine-sodium salicylate 15 milligrams.
 Quinine hydrochlorate.. 20 centigrams.
 Morphine hydrochlorate 5 milligrams.
 Saccharin 1 milligram.

Make into pastilles with chocolate.

724. Pastilles, Morphine.

Morphine acetate..... 5.0
 Powdered sugar..... 980.0
 Powdered tragacanth..... 2.5
 Glycerine 15.0

Water, quantity sufficient.

Make into 1,000 pastilles, each containing 0.005 morphine acetate.

725. Pastilles, Saccharin.

Saccharin 3.4 grams.
 Sodium carbonate dry..... 2.0 grams.
 Mannite 50.0 grams.

Make 100 pastilles.

One pastille is sufficient to sweeten a cup of tea, coffee, or chocolate.

726. Pastilles, Tar.

Tar 100.0
 Glycerine 200.0
 Distilled water..... 200.0
 Alcohol 50.0

Allow to stand three hours, frequently agitating, then set aside for several days in a cool place, frequently agitating. Decant the clear solution and evaporate upon the water-bath to 250.0. Mix this with

Cacao mass (from which the oil has been liberated)..... 300.0
 Sugar 350.0
 Tragacanth 100.0

Water, quantity sufficient.

Make into a mass and divide into 1,000 troches.

727. Pastilles, Tar.

Tar 5 drams.
 Alcohol 1 ounce.
 Tar water..... 8 ounces.
 Gum tragacanth, powdered 1 dram.
 Powdered sugar..... 1 pound.
 Oil lemon..... 25 drops.

Dissolve the tar in the alcohol, add the tar water, and evaporate the mixture on a water-bath until it is reduced to 1 ounce and a half. Strain to separate the resinous matters, and add the gum tragacanth to the clear liquid to make a mucilage, and lastly the sugar, to obtain a mass to be divided into about 450 troches. Each pastille contains the active principles of 2 ounces of tar water.

728. Tablets, Chocolate Cocaine.

Hydrochlorate of cocaine... 3 grains.
 Powdered tragacanth 36 grains.
 Powdered chocolate 108 grains.
 Essence vanilla 20 drops.
 Water 50 drops.
 Make a mass, and divide into 48 tablets.

729. Tablets, Potassium Chlorate.

Chlorate of potassium, in
 fine powder 96 parts.
 Tragacanth, in fine powder 4 parts.
 Make a paste with water, and form into
 tablets containing 4 grains.

730. Tablets Salol.

Gum tragacanth, 15 grains; gum arabic,
 45 grains; water, 2½ drams; salol, 6¼ drams;
 sugar, 15 drams; essence citronella, 5 drops.
 To produce 100 tablets, each containing be-
 tween 3 and 4 grains of salol.

CHEMICALS, SALTS, ETC.

731. Bismuth Oxyiodide.

Dissolve 95.4 parts of crystallized nitrate
 of bismuth by the aid of a gentle heat in
 120 to 150 parts of glacial acetic acid (96
 per cent acid), and pour this solution, with
 constant stirring, into a solution of potas-
 sium iodide 33.2 parts, crystallized sodium
 acetate 54.4 parts, in water 2,500 parts. The
 precipitate is to be washed first by decan-
 tation, then on a filter, and dried at 100
 degrees C. (212 degrees F.). The product is
 a bright, brick-red powder, which ought to
 be kept protected from light.

732. Bismuth Subiodide.

Method by trituration:

Bismuth subnitrate 2½ ozs. 24 grs.
 Water (hot) 8 fl. ounces.
 Potassium iodide 11 drs. 3 grs.
 Dilute nitric acid q. s. or about 6
 fluid drams.

Triturate, in a mortar, the bismuth com-
 pound, with the potassium iodide dissolved
 in the hot water, and then slowly add
 with constant trituration, 4 fluid drams of
 the dilute acid, and the remainder, drop
 by drop, until the decomposition is com-
 plete. Filter; wash the precipitate thor-
 oughly with warm water until the wash-
 ings cease to affect blue litmus paper; dry,
 and powder. The yield is about 3 troy
 ounces.

733. Bismuth Subiodide.

Method by precipitation:

Bismuth subnitrate 2½ ozs. 24 grs.
 Acid nitric 3 fl. ounces.
 Hot water 10 fl. ounces.
 Potassium iodide 11 drs. 3 grs.
 Hot water 28 fl. ounces.

Dissolve the bismuth salt in the acid in
 a porcelain capsule with the aid of heat,
 and add 12 fluid ounces of boiling water in
 small portions at a time, stirring after
 each addition. Then pour the bismuth so-
 lution in the hot water, in which has been
 dissolved the iodide, agitating it well after
 each addition. Continue agitation until
 decomposition is complete. Filter at once.
 Wash the precipitate with warm water,
 dry and powder. The yield is about the
 same as by the trituration method.

734. Bismuth Tetroxide.

In an iron dish melt together oxide of
 bismuth 1 part, potassium chlorate 1 part,
 caustic soda 2 parts, maintaining the heat
 for 1 hour; cool, treat with water until
 the washings are no longer alkaline, then
 treat the residue with 5 per cent solution
 of nitric acid, wash and dry at 100 degrees
 F. The dark brown residue remaining is
 the bismuth tetroxide.

735. Calcium Benzoate.

Mix 1,952 grains of benzoic acid with 800
 grains of precipitated chalk in a mortar,
 and gradually add some water; when effe-
 rescence ceases, transfer to a porcelain
 dish and add sufficient boiling water to
 make 4 pints and to dissolve all of the
 benzoate formed. Filter from the slight
 excess of carbonate of calcium while hot
 and set aside to crystallize. The mother
 liquors yield a further quantity of crystals,
 the whole product being 4 ounces 5 drams.

736. Calcium Iodide.

Iron, in fine wire..... 56 parts.
 Iodine 381 parts.
 Calcium carbonate 150 parts.
 Water sufficient.

Mix 56 parts or any moderate excess of
 iron with 1,200 parts of water and 254 parts
 of iodine gradually added. When the re-
 action is completed and a light green solu-
 tion is obtained, filter this and add to it
 the remainder of the iodine. Then, when
 this has all dissolved with the formation
 of a brown-red solution, add the calcium
 carbonate (150 to 160 parts) by degrees, and
 warm the mixture, when the efferves-
 cence slackens, until the evolution of gas
 has ceased and all the iron is precipitated.
 Let the dense precipitate subside, and de-
 cant the supernatant liquid. Mix the resi-
 due with enough water to restore the orig-
 inal weight; let subside and again decant.
 Mix the two decantates, pour the solution
 upon a filter, and when all has passed
 through pour the sediment into the filter
 and wash it with water until practically
 free from calcium iodide. Unite all the
 filtrates, and evaporate the mixture until

a dense pellicle forms over the surface and boiling continues only at a narrow vent. Now pour the fused salt into a shallow plate of suitable size, cover it well, and when cool detach the hardened mass, break it up and preserve it in well-stoppered bottles.

737. Iron Carbonate Effervescent.

Tartaric acid	100. parts.
Sodium bicarbonate	166.66 parts.
Crystallized ferrous sulphate	40. parts.
Citric acid	8. parts.
Sugar	50. parts.
Oil lemon	1.5 parts.
Mix with absolute alcohol	1. part.

738. Iron Citrate Effervescent.

Mix together 20 parts of sodio-pyrophosphate of iron, 60 parts of citric acid, 60 parts of sodium bicarbonate, and 120 parts sugar, all in moderately coarse powder, and warm gently under trituration in a porcelain mortar until the mass agglutinates. Cool, pass through a moderately fine sieve, keep protected from the light in dry, tightly closed bottles. The preparation is in the form of white granules, soluble in water, evolving carbonic acid, with a mild acidulous taste.

739. Iron Oxide Soluble Saccharated.

Solution of oxychloride of iron.....	86 parts.
Syrup	150 parts.
Solution of soda.....	7.5 parts.
Sugar, enough to make..	100 parts.

Heat together the iron solution and syrup in a capsule on the water-bath, gradually add, under stirring, the solution of soda, and evaporate to dryness. Reduce the mass to powder and incorporate with it enough sugar to make 100 parts. The solution of oxychloride is equivalent to "dialyzed iron" having a specific gravity of 1.050. The solution of soda contains 15 per cent of pure soda, and of the specific gravity of 1.159-1.163. This product is a light brown powder, without odor, having a sweet, scarcely ferruginous taste, and easily soluble to a clear liquid in one-half its weight in water. One hundred parts contains 3 parts of iron. It is soluble in milk and liquids containing albuminoids without altering them.

740. Iron "Saccharide" Soluble.

Dissolve 100 parts of perchloride of iron in 500 parts of water. Dissolve separately in an equal amount of water 85 parts of sodium bicarbonate. Mix the solutions, collect the precipitate and grind with 100 parts of powdered sugar, previously mixed with 1½ parts of caustic soda dissolved in three parts of water. The mixture is finally dried and powdered.

741. Iron Succinate.

Dissolve 60 grains of succinic acid in 3 fluid ounces of water, neutralize nearly with ammonia, and dilute to 6 fluid ounces. Transfer the solution to an 8-ounce bottle, add ½ fluid ounce of liquor ferri persulphatis, and agitate well. Transfer the mixture to a filter, and wash the precipitated ferric succinate thoroughly with distilled water. Next take 80 grains of citric acid, put it into a beaker, and add with stirring a sufficient quantity of ammonia water until the acid is dissolved and the solution neutral. Finally, transfer the moist ferric succinate to a porcelain capsule, add the solution of ammonium citrate, and dissolve, assisted by a gentle heat. The solution, when diluted, to measure 6 fluid ounces, will contain in a fluid dram 2 grains of the ferric succinate or 5 grains of the double salt.

742. Lithium Carbonate, Effervescent.

Carbonate of lithium.....	10 parts.
Bicarbonate of sodium.....	30 parts.
Tartaric acid	20 parts.
Sugar,	
Alcohol, of each.....	40 parts.

Reduce the solids to a fine powder, mix thoroughly, dampen and knead it with the alcohol, then rub it through a coarse tinned iron or hair sieve or through an enameled colander, and dry it first at 20 degrees C. (68 degrees F.), then at 40 degrees C. (104 degrees F.). Separate the first somewhat coherent mass by continuous pressure and preserve in well-closed vessels.

743. Lithium Citrate, Effervescent.

Citrate of lithium.....	10 parts.
Bicarbonate of sodium.....	30 parts.
Tartaric acid,	
Sugar,	
Sugar of milk, of each.....	20 parts.
Alcohol	40 parts.

744. Magnesia Citrate Granular.

Calcined magnesia.....	8 ounces.
Carbonate of magnesia....	4 ounces.
Powdered citric acid.....	26 ounces.
Powdered white sugar, a sufficient quantity.	

Heat a small quantity of the sugar in a pan over a gentle fire until it commences to stick; then sift in the carbonate and calcined magnesia and citric acid, thoroughly mixing them; lastly rub through a sieve of the desired size.

745. Magnesium Salicylate.

Dissolve salicylic acid in boiling distilled water and saturate the hot solution with magnesium carbonate. It crystallizes in colorless needles, readily soluble in water and alcohol.

746. Potassium Iodide, Without Iodate.

Mix one part of amorphous phosphorus with thirty parts of water, and add gradually finely powdered iodine as long as it dissolves without color, the quantity required being $13\frac{1}{2}$ parts. The colorless solution is decanted, the residue washed, the clear united liquids mixed with milk of lime (prepared from 8 parts of lime) to alkaline reaction. The solution of calcium iodide is filtered to separate calcium phosphate, phosphite and hydrate, the residue washed, and the solution extracted with a hot solution of 6 parts crystallized potassium sulphate in 48 parts of water. After standing six hours, the liquid is strained, the residue of sulphate of calcium washed and pressed, the fluid evaporated to 35 volume parts and potassium carbonate added to separate the remainder of the calcium, and the solution after the gelatinous precipitate has become dense, is filtered and evaporated to the crystallizing point.

Iodate of potassium is reduced to iodide by treating the warm solution with iron filings, with powdered zinc or with the zinc copper couple. The metal is oxidized and it is said the solution is not contaminated. Reduction may be effected in the cold by immersing in the solution clean plates of iron and copper, connected to form a galvanic couple. The reduction, however, by any of these methods is rather tedious, and the solutions must be rather dilute.

747. Quinine Bimuriate.

Quinine, precipitated,
washed and dried at a
temperature not exceed-
ing 50 to 52 degrees C.. 37.8 grams.
Hydrochloric acid, spe-
cific gravity 1.16..... 22.82 grams.
Water 60 c. c.

Mix the acid and water, add the quinine, filter if necessary, and carefully evaporate to dryness.

748. Quinine Hydrochlorate, Ex-temporaneous.

Boil sulphate of quinine for ten minutes in a closed flask along with alcohol and common salt. Concentrate the solution, and let cool. The sodium sulphate formed by decomposition, and the sodium chloride in excess, will be deposited. Decant the liquor, and continue the concentration, when the quinine hydrochlorate will crystallize out.

749. Quinine Tannate.

Suspend 20 parts of quinine sulphate in 80 parts distilled water, add sufficient diluted sulphuric acid to dissolve (20 to 25 parts), then add distilled water up to 100

parts; filter, and add under diligent stirring, a solution of 40 parts of sodium carbonate in 160 parts of water. Collect the precipitate on a filter, wash well with cold water, let drain, and then dissolve, still moist, in 200 parts of 95 per cent alcohol. Filter, and let it trickle under constant stirring into a cold, clear solution of 60 parts of tannic acid in 1,000 parts water. Stir the mixture occasionally during some hours after, and let it settle. Collect the precipitate on a moistened paper, filter, wash with distilled water at 85 degrees F. until the water running off has no longer an astringent taste. Dry at a temperature not to exceed 85 degrees F.

750. Quinine Tannate, Tasteless.

Forty grams of sulphate of quinine are dissolved in 1,200 grams of water with the quantity of dilute sulphuric acid exactly necessary to effect the solution. To the filtered solution, a solution of 80 grams tannic acid in 560 grams of water is added, and this is followed by the addition of a solution of 20 grams tannic acid and 20 grams solution of ammonia in 320 grams water, the mixture being constantly stirred during these additions. After allowing the precipitate to subside for 24 hours, it is transferred to a filter, washed with 400 grams water, and pressed lightly to remove the surplus water. The pressed precipitate is then heated with 200 grams of water, until it melts it to a transparent, yellowish, resinlike mass, which is dried and reduced to a powder. It constitutes a yellowish, nearly tasteless powder, and contains from 30 to 32 per cent of quinine.

751. Vichy Salts, Granular Effervescing.

Mix together 7 ounces of dry carbonate of soda, $13\frac{1}{2}$ ounces dry powdered sugar; 252 grains dry precipitated carbonate of lime, 64 grains dry carbonate of magnesia, 60 grains dry saccharated carbonate of iron, 2 ounces dry chloride of sodium, 2 ounces dry sulphate of soda, and 10 ounces powdered citric acid; pass through a No. 60 sieve; moisten with $3\frac{1}{2}$ fluid ounces of stronger alcohol, and granulate through a No. 8 sieve; bottle and keep dry.

752. Zinc Lactate.

A quarter of an ounce by weight of syrupy lactic acid is neutralized with strong solution of ammonia. This solution is poured into one of 287 grains of pure sulphate of zinc in $\frac{1}{2}$ an ounce of water and stirred for a few seconds. Crystals will form at once, and, after standing for 12 hours, they are washed twice with 1 ounce of water, drained, and dried upon a porous tile.

MISCELLANEOUS.

753. Alcohol, to Deodorize.

To each gallon add an aqueous solution of four to eight grains of permanganate of potassium, shake well, and add after five minutes as much chloride of lime, previously rubbed with a little water. Filter the liquor after several hours, and set it aside for a few days. The alcohol will then have lost its chlorine smell, and acquired a peculiar flavor, which, however, depends upon the proportions of the permanganate and the chloride of lime. If then distilled, the alcohol may be used as the finest cologne spirit.

754. Alcohol, to Deodorize.

Alcohol	1 gallon.
Unslaked lime.....	4 drams.
Powdered alum	2 drams.
Sweet spirit of nitre.....	1 dram.

First reduce the lime to a very fine powder, add to it the alum, mix the two powders well together, and pour them into the alcohol. Shake well, add the sweet spirit nitre, and shake again. After the mixture has been kept a week, with occasional agitation, filter it through animal charcoal.

755. Clarifying Powder for Alcoholic Liquids.

Egg albumen, dry	40 parts.
Sugar of milk	40 parts.
Starch	20 parts.

Reduce them to a very fine powder and mix thoroughly. For clarifying liquors, wines, essences, etc., take for every quart of liquid 75 grains of the above mixture. Shake repeatedly in the course of a few days, the mixture being kept in a warm room. Then filter. Powdered talcum renders the same service, and has the additional advantage of being entirely insoluble.

756. Clearing Powder for Wines, Liquors, Vinegars, Etc.

Albumen	3 pounds.
Neutral tartrate potassium	4-5 ounce.
Alum	½ pound.
Ammonium muriate	7 pounds.

The powder must not be added direct to the liquid to be cleared, but must first be mixed with soft water. About 20 grains of this powder are said to be sufficient for clearing a gallon of fluid.

757. Vinegar Ipecac.

Take of ipecacuanha root in No. 20 powder 1 ounce, acetic acid 2 fluid ounces, distilled water q. s. Macerate the powder in

1 ounce of the acid for 24 hours, and then pack in a percolator. Mix the remainder of the acid with 10 ounces of distilled water, and percolate with the mixture, continuing the percolation with distilled water until 1 pint of the vinegar is obtained.

758. Acid Acetic Carbulated.

Mix 10 carbolic acid cryst., 85 acetic acid, and 5 oil of eucalyptus. For fumigating the sick chamber, drop upon a hot plate.

759. Aloin.

Aloes crushed small are to be dissolved in 9 or 10 times their weight of boiling water acidified with sulphuric acid. After cooling and standing for a few hours, the clear liquid is decanted from the resin and evaporated. The concentrated solution deposits a mass of yellow crystals, which can be purified by washing, pressure and recrystallization from hot spirit.

760. Antidote, Arsenic.

Tincture of chloride of iron	1 ounce.
Bicarbonate of sodium (or potassium)	1 ounce.
Tepid water	a teacupful.

Sesquioxide of iron suspended in solution of chloride of sodium (containing, however, a large excess of alkaline bicarbonate) is thus produced. The mixture may be given almost ad libitum.

761. Antidote, Jeannel's Multiple.

1—Crystallized ferrous sulphate	139 grams.
Warm distilled water.....	110 grams.
2—Crystallized monosulphide of sodium	110 grams.
Calcined magnesia	29 grams.
Distilled water	600 grams.

The mixture of these liquids produces sulphide of iron (without excess of alkali or ferrous sulphate), sulphate of soda, a little sulphate of magnesia and ferrous oxide, and a large excess of magnesia. There are thus present three efficient antidotes, sulphide of iron, ferrous oxide, and magnesia, besides two purgative salts, sulphates of soda and magnesia.

The preparation should be kept from contact with air. It is administered in large and frequently repeated doses in cases of poisoning by metallic preparations, cyanides or hydrocyanic acid; it is not, however, an antidote for the preparations of arsenic, tartar emetic, or the salts of the alkaloids.

762. Chlorine, Rapid Generation.

Chlorinated lime mixed with sufficient bisulphate of potassium or sodium to liberate all the chlorine. It needs merely the addition of water.

763. Mass Copaiba.

Copaiba	10 parts.
Glycerine	2 parts.
Sugar	10 parts.
Magnesia (calcined)	10 parts.
Powdered licorice root.....	8 parts.

Rub up the copaiba and glycerine intimately together, and then add the remaining ingredients gradually in the order named.

764. Capsules Copaiba Compound.

Salol	3½ grains.
Oleoresin of cubeb	5 grains.
Balsam of copaiba, Para 10	grains.
Pepsin	1 grain.

765. Capsules Gelatin.

Dissolve	
Gelatin	8 parts.
Sugar	2 parts.
Gum arabic	1 part.

In Water (on a water-bath)..... 8 parts.

Dip iron pins, the lower ends of which are pear-shaped and slightly oiled, into the lukewarm solution. The thin gelatin films formed on the iron pins, when congealed, are detached and placed in a hole of corresponding size in wooden forms and allowed to dry. The capsules, when thoroughly dry, are filled with the respective medicines, and closed with a drop of the same solution.

766. Capsule Gelatin Flexible.

Gelatin, in thin sheets..	16 ounces.
Water	20 ounces.
Glycerine	12 fl. ounces.
Simple syrup	8 fl. ounces.

Mix the water, glycerine and syrup, and soak the gelatin in the mixture; when uniformly soft, melt on a water-bath.

767. Glycerol Thymol.

Thymol	1
Glycerine	25
Alcohol	25
Water sufficient to make.....	500

768. Glycerite Thymol.

Thymol	1.2 grams.
Glycerine	30. grams.
Alcohol	30. grams.
Distilled water	540. grams.

769. Gray Oil.

Triturate in a warm mortar 1.5 grams solid white vaseline, 1 gram mercurial ointment, and 19.5 grams of mercury, until the mercury is extinguished, then add 7 grams of white vaseline (solid) and 20 grams of liquid vaseline. The preparation contains 40 per cent of mercury, and is quite liquid.

770. Honey Licorice, Aromatized.

Fluid extract of licorice	
root	4 fl. ounces.
Fluid extract of coriander	1 dram.
Fluid extract fennel.....	30 minims.
Fluid extract cardamom	60 minims.
Fluid extract anise.....	30 minims.
Deodorized alcohol	4 fl. ounces.
Distilled water	5 fl. ounces.
Clarified honey	19 fl. ounces.
Mix and filter.	

771. Crayons Iodoform.

Ten grams powdered iodoform, 50 grams gum tragacanth, and sufficient each of glycerine and water.

772. Crayons Iodoform.

Twenty grams iodoform and 2 grams each of gum arabic, glycerine, and starch.

773. Iodoform Deodorized.

Iodoform	197 parts.
Carbolic acid.....	1 part.
Oil of peppermint.....	2 parts.

774. Pencils Iodoform, Hard.

Iodoform	20 parts.
Powdered acacia.....	6 parts.
Powdered sugar.....	5 parts.

Mix with water to a plular mass, and roll it out into pencils, which are to be dried at a gentle heat. Should they have a tendency to flatten during the drying, they must be re-rolled from time to time.

775. Pencils Iodoform, Flexible.

Iodoform	10 parts.
Powdered acacia.....	1 part.
Powdered tragacanth.....	1 part.
Glycerine,	

Water, of each equal parts.

Make a mass, roll it out into pencils, and dry them at a gentle heat.

776. Pencils Iodoform, Flexible.

Gelatin	1 part.
Glycerine	2 parts.
Water	1 part.
Iodoform	4 parts.

Dissolve the gelatin in the glycerine and water on a water-bath, replacing any water lost by evaporation. Then mix with it the iodoform, and pour the mass into molds.

777. Pencils Iodoform, Fusible.

Iodoform	10 parts.
Butter of cacao.....	9 parts.
Liquid paraffin.....	1 part.

Mix the butter of cacao (in fine shavings) with the liquid paraffin to a uniform mass, without employing heat; then incorporate the iodoform, and roll the mass out to pencils.

778. Pencils Iodoform.

Iodoform powdered, 50; starch (or gum mastic), 5; distilled water, 9.5; make pencil 8 centimeters long and 4 millimeters thick.

779. Pencils Iodoform.

Iodoform powdered, 5; starch or gum mastic, 6; glycerine, 9.5; make a pencil 6 centimeters long and 1 centimeter in thickness.

780. Sponges Iodoform.

Immerse the sponges in water containing 5 per cent of hydrochloric acid, and after allowing them to stand five days wash them thoroughly in fresh water, dry and then place in a 7½ per cent ethereal solution of iodoform, and finally allow the ether to evaporate and preserve the sponges in glass stopper bottles. An excellent method, particularly applicable to small soft sponges, which should be very carefully cleansed prior to the operation.

781. Iron Milk.

Pyrophosphate of sodium.	20 parts.
Solution of chloride of iron	23 parts.
Glycerine	50 parts.
Distilled water, enough to make	1,000 parts.

Dissolve the pyrophosphate of sodium in 400 parts of distilled water, add the glycerine, and filter. Dilute the solution of chloride of iron (U. S.) with 400 parts of distilled water, pour this slowly into the cold solution of the sodium salt, under gentle and slow stirring, and add enough water to make 1,000 parts.

782. Iron Milk (Lac Ferratum).

Sodium phosphate, twenty-seven; solution of chloride of iron (specific gravity 1.480), seventeen; distilled water, 1,000. Dissolve the sodium phosphate in the distilled water and gradually pour in the solution of chloride of iron (previously diluted with 3 or 4 volumes of distilled water) stir well, collect the precipitate upon a linen strainer, wash it with distilled water until the washings are scarcely rendered turbid by solution of nitrate of silver, and mix the still moist precipitate with sufficient distilled water to produce a volume of 1,000 parts. It contains 0.25 per cent of iron.

783. Iron Oxide Dextrinated, Soluble.

Dextrin, pure, sufficient quantity.
Solution oxychloride of iron 290 parts.
Solution of soda..... 25 parts.
Distilled water, sufficient quantity.

Dissolve 80 parts of pure (yellow soluble) dextrin in 80 parts of distilled water, dilute the liquid with the solution of oxychloride of iron (equivalent to dialyzed iron, sp. gr.

1.050), filter, and wash the filter with a little water. Heat the filtrate in a capsule to between 70 and 90 degrees C., gradually add while stirring, the solution of soda (containing nearly 15 per cent of pure soda, sp. gr. 1.159-1.163), and evaporate to dryness. The dry, dark-brown mass, having a red-brown color by transmitted light, is reduced to a fine powder, and mixed with enough pure dextrin to make 100 parts of product. It is soluble in 1.5 parts of water. One hundred parts contain 10 parts of iron.

784. Licorice Paste.

Dissolve 600 parts of gum arabic in 2,500 parts of cold distilled water, and add 600 parts of sugar and 10 parts of fresh egg albumen. Then stir in 10 parts of the filter paper torn in small pieces and heat the whole to a boil, skimming off the foam as it rises. When the seum no longer rises, remove from the fire and filter through a thick flannel bag, previously wet with warm distilled water. If not perfectly clear, the filtrate should be run through the second time; then evaporated on a water-bath to 1,600 parts, stirring constantly; and 10 parts of pure licorice extract, entirely soluble in water, are added and evaporation continued down to 1,300 or 1,400 parts. During this part of the operation the mixture should not be stirred, as it causes the mass to foam. When the requisite degree of evaporation has been attained remove the pellicle on the surface, and pour into molds of parchment paper.

785. Lotion Lead and Opium.

Solution of subacetate of lead	1 fl. ounce.
Glycerine	1 fl. ounce.
Tincture of opium.....	1 fl. ounce.
Water to	1 pint.

Dilute the tincture of opium with 15 or 16 ounces of water. Mix the lead and glycerine together, add these, and finally make up to 20 ounces with water.

786. Menthol Cones.

The molds must be perfectly smooth inside, and the two parts should join exactly. An ordinary 2-dram pessary mold is sometimes used for the cones, and in the absence of anything else is quite suitable. Menthol to be used for making cones must be quite free from oil. Place the menthol in 1 ounce quinine bottle, and then place the bottle in hot water. Its contents soon melt and are ready for pouring into the mold. Meanwhile, the latter should have been placed near the fire, so as to acquire such a degree of warmth as may be comfortably held in the hand. It is very important that this heating should be

carefully attended to, as the temperature of the mold has much to do with the success of the operation. As soon as the cones solidify, they are removed from the molds, so as to prevent the latter from becoming cold again. Once the molds get below the proper temperature, the molds are certain to break. The next thing to do is to fix them in the holders. This is a matter which requires some attention and care. Instead of melting the base of the cone in a spirit flame, as is generally done, a better plan is as follows: Get a lead ring made and place it (the smaller end downwards) in a flat evaporating dish (the lid of a 2-ounce ointment pot will do), along with some menthol. When the latter has melted dip a cone first in the ring, then in the hot menthol, and immediately fix in the holder.

787. Menthol Pencils.

Cacao butter is melted on a water bath with 3 to 4 per cent of pure wax, and the menthol is added to the somewhat cooled mass in the proportion prescribed by the physician—this amounting usually to 3 or 4 per cent. By suction it is collected in glass tubes of the required bore—from the thickness of a knitting needle to that of a lead pencil—which have previously been moistened with glycerine, and the tubes are then placed in cold water. After a short time the menthol pencils are removed from the tubes by means of wires or glass rods of suitable size.

788. Species Laxative, St. Germain.

Senna leaves, exhausted by
alcohol 16 parts.
Elder flowers..... 10 parts.
Fennel seeds..... 5 parts.
Aniseed 5 parts.

Cut and bruise, mix well and on dispensing add bitartrate of potassium, 3 parts.

789. Species Wood.

Guaiac wood, rasped..... 4 parts.
Burdock root, cut..... 2 parts.
Ononis spinosa, cut..... 2 parts.
Licorice root, cut..... 1 part.
Sassafras root, cut..... 1 part.

790. Pine Spirit (Pine Vapor).

Pine-spirit or pine-vapor, used as a spray in purifying the atmosphere of rooms, is made as follows: 70.0 oil of *pinus sylvestris*, 8.0 oil of juniper berries, 5.0 oil of rosemary, 2.0 each of the oils of lavender and lemon, 1.0 oil of bergamot, and 1000.0 alcohol are allowed to stand in a moderately warm place for several days,

filtered and then bottled. A more pleasant aroma is obtainable if to the above be added 200.0 pine twigs and 500.0 additional alcohol, and distilling after allowing to stand for a few days.

791. Spirits Wormwood Compound.

Wormwood 4 pounds.
Juniper 9 ounces.
Cinnamon 2 ounces.
Angelica root..... ½ ounce.
Alcohol, 34 per cent..... 17 pounds.

Macerate for 14 days, distill 12 pounds, pour back and redistill 10 pounds.

792. Syrup Spice.

Spice tincture (No. 346) 1½ fl. ounces.
Honey 16 fl. ounces.
Water 4 fl. ounces.
Syrup 20 fl. ounces.

Or the honey and water may be replaced with the same bulk of syrup.

793. Tincture of Tumenol.

Mix 1 part of tumenol with 9 parts of a mixture of equal parts of alcohol, ether and water. In some instances the water is replaced with glycerine. Tumenol is made from mineral oil (bitumen and oleum). It is a sulphonated hydrocarbon.

794. Ointment of Tumenol.

Tumenol 1 dram.
Oxide zinc 30 grains.
Subnitrate bismuth 30 grains.
Cold cream 5 ounces.
Simple ointment 5 ounces.

795. Vinegar Cantharides.

Cantharides in powder, 2 ounces; acetic acid, 1 pint; macerate, with agitation, for 8 days, then press and strain.

796. Vinegar Cantharides.

Cantharides, 3 ounces; euphorbium, ½ ounce; acetic acid, 5 fluid ounces; pyroligneous acid, 15 fluid ounces; macerate a week.

797. Vinegar Cantharides.

Spanish flies, 4 ounces; strong acetic acid, 4 fluid ounces; commercial acetic acid (sp. gr. 1.044), 16 fluid ounces; macerate as before, for 14 days.

798. Vinegar Cantharides.

Cantharides, in powder, 2; glacial acetic acid, 2; acetic acid (28 per cent), 18, or a sufficiency; add the glacial acetic acid to 13 of acetic acid, and in this mixture digest the cantharides for 2 hours at a temperature of 200 degrees F.; when cold, place them in a percolator, and when the liquid ceases to drop, pour over the residuum the remaining 5 ounces of acetic acid, and when the percolation is finished, press and make the whole liquid up to 20.

799.

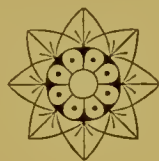
Koussin.

Mix the powdered koussou with 2 per cent of its weight of slaked lime, and exhaust first with alcohol of 80 degrees Tr., then with boiling water. The filtered fluids are mixed, the alcohol distilled off, the residue acidulated with acetic acid, and the resulting precipitate collected, washed with water and dried at a low temperature. This precipitate consists of koussin, tannin and resin. It is treated with excess of sodium bicarbonate, and the tannin and resin removed by extraction with chloroform. The residue is dissolved in water, acidulated with acetic acid—avoiding large excess, and the precipitated koussin is washed with water and crystallized from alcohol. Koussin has the characters of an acid, forming compounds with alkalies and with lead. It seems to be allied to santonin.

800. Essence Peppermint, to Improve the Color.

Have the peppermint herb ground to the proper fineness, then add enough water to moisten the herb, pack in a percolator and percolate with water until there is no red color in the percolate; then allow the water to all drip out of the percolator and continue the percolation with the alcohol; when the desired quantity is obtained, add the oil of peppermint to it and filter.

This process washes the red color of the stems out of the ground herb and leaves the pure green color of chlorophyll in the finished product. The old way of coloring, the preparation soon turns a dingy brown; the new method will always retain its color.



PART II.

Proprietary Preparations, Patent Medicines, etc.

801. Allecock's Porous Plaster.

Drug. Circ.

Virgin India rubber 1 pound.
Pitch $\frac{1}{2}$ pound.
Gum thus $\frac{1}{2}$ pound.
Capsicum 30 grains.

802. Allen's Excelsior Axle Grease.

Am. Phar.

Castor oil 1 quart.
Linseed oil 1 quart.
Tallow 2 pounds.
Resin 2 pounds.
Beeswax 1 pound.

If too hard, add a little neatsfoot oil; if too soft, add tallow.

803. Mrs. Allen's World Renowned Hair Restorer.

Bull. Soc. Ph. Sud.

Precipitated sulphur 1.69
Canella alba 0.20
Glycerine 32.00
Crystallized acetate of lead... 2.65
Water 63.00

804. Allen's Lung Balsam.

Kilner.

Tincture sanguinaria..... 8 ounces.
Tincture lobelia 8 ounces.
Tincture opium 4 ounces.
Tincture capsicum $1\frac{1}{2}$ ounces.
Essence sassafras 1 ounce.
Essence anise 1 ounce.
New Orleans molasses..... $\frac{1}{2}$ gallon.

Bring the syrup to a boil, cautiously add the other ingredients.

805. Althoff's Wonder Water.

(Aqua Mirabilis.)

Hager.

Vinegar 400 parts.
Sulphate of copper 50 parts.
Potash 15 parts.
Ammonia 20 parts.
Kleesalz 4 parts.
Brandy 200 parts.

This is identical with the Aqua Vulneraria Krantz.

806.

Ammonin.

Zirnite (Ch. Ztg.)

Carbonate of sodium... 21.20 per cent.
Water 4.30 per cent.
Sulphide of calcium... 1.00 per cent.
Silica 30.80 per cent.
Sand and aluminium... 3.80 per cent.
Lime 34.28 per cent.
Magnesia 1.40 per cent.
Substances soluble in
water 1.50 per cent.

807.

Antikamnia.

Amer. Jour. Pharm.

Antifebrin or acetanilid.... 47 parts.
Bicarbonate of sodium..... 50 parts.
Tartaric acid 3 parts.

808.

Antikamnia.

Amer. Jour. Pharm.

Sodium bicarbonate, 22.2; acetanilid, 67.4, and caffeine, 9.8; it is very probably made by taking 20, 70 and 10 parts, respectively.

809.

Antikamnia.

Pharm. Rund.

Acetanilid 47 to 86 parts.
Sodium bicarbonate ... 14 to 50 parts.
Tartaric acid 3 to 6 parts.
Caffein 3 to 10 parts.

810.

Antinervin.

Pharm. Rund.

Acetanilid 50 parts.
Salicylic acid 25 parts.
Ammonium bromide 25 parts.

811.

Antinervin.

Pharm. Rund.

Acetanilid 50 parts.
Sodium salicylate 50 parts.

812. Ashton's Inseparable Shaving Cream.

Creme d'armande..... 30 parts.
 Oil almonds, expressed... 50 parts.
 Glycerine 150 parts.
 Rectified spirit..... 150 parts.
 Oil geranium,
 Oil bergamot,
 Oil neroli,
 Oil citronella, of each.... 3.5 parts.
 Distilled water..... 725. parts.

813. Athlophoros.

.. New Idea.

Acetate of potash..... 1 dram.
 Salicylate of soda..... 490 grains.
 Sugar 4 ounces.
 Caramel 3 drops.
 Water 14 fl. drams.

To make 4 ounces. Dissolve the salts and sugar in the water, add caramel, and if need' be, a little water to make the product measure 4 fluid ounces.

814. Ayer's Cherry Pectoral.

Am. Dr.

Morphine acetate..... 3 grains.
 Tincture blood root..... 2 drams.
 Wine antimony,
 Wine ipecac, of each..... 3 drams.
 Fluid extract wild cherry.. 3 ounces.
 Oil bitter almonds..... 3 minims.
 Syrup, enough to make.... 8 ounces.

815. Ayer's Cherry Pectoral.

New Idea.

Syrup wild cherry..... 6 drams.
 Syrup squills..... 3 drams.
 Tincture blood root..... 2 drams.
 Sweet spirit nitre..... 2 drams.
 Wine of antimony..... 3 drams.
 Wine of ipecac..... 3 drams.
 Syrup 1½ ounces.
 Morphia acetate..... 2 grains.
 Spirit bitter almonds..... 1 dram.

816. Ayer's Cherry Pectoral.

Morphine acetate..... 3 grains.
 Wine of antimony..... 3 drams.
 Wine of ipecac..... 3 drams.
 Tincture of sanguinaria.... 2 drams.
 Syrup wild cherry..... 3 drams.

817. Ayer's Hair Vigor.

Acetate of lead..... 3 parts.
 Flowers of sulphur..... 2 parts.
 Glycerine 14 parts.
 Water 80 parts.

818. Ayer's Sarsaparilla.

New Idea.

Alcohol 3 ounces.
 Extract of sarsaparilla.... 3 ounces.
 Extract of yellow dock.... 3 ounces.
 Extract of stillingia 2 drams.
 Extract of mandrake..... 2 drams.
 Sugar 1 ounce.
 Iodide of potash..... 90 grains.
 Iodide of iron..... 10 grains.

819. Ayer's (Mrs.) Recamier Balm.

Boston Herald.

Zinc oxide..... 5 pounds.
 Glycerine 2 drams.
 Alcohol 2 ounces.
 Mercuric chloride..... 4 ounces.
 Distilled water..... 64 quarts.

820. Ayer's (Mrs.) Recamier Cream.

Manufactured by Harriet Hubbard Ayer:

Zinc oxide..... 2 troy ounces.
 Glycerine 6½ fl. drams.
 Water 2½ fl. drams.
 Spirit of rose (4 drams
 per pint)..... 1 fl. dram.,

Triturate together until perfectly smooth.

821. Ayer's (Mrs.) Recamier Cream.

Boston Herald.

Rice flour..... 48 ounces.
 Zinc oxide..... 60 ounces.
 Glycerine 640 ounces.
 Cacao butter..... 48 ounces.
 Lard 48 ounces.
 Mercuric chloride..... 4 ounces.
 Make 32 pints.

822. Balsam.

Ph. Ztg.

Quillaya bark..... ¾ part.
 White soap 4 parts.
 Hematin 4 parts.
 Water 4 to 8 parts.

The hematin is placed in other samples with other colors, as the preparation is placed on the market in several shades, appropriate to the color of the fabric upon which it is to be used.

823. Barry's Tricopherous.

New Idea.

A preparation substantially the same consists of

Castor oil..... 4½ fl. drams.
 Alcohol 2½ fl. ounces.
 Oil lavender..... 2¾ minims.
 Oil bergamot..... 7½ minims.

Fluid extract alkanet,

sufficient quantity, or
 about 5 minims.

If desired add 3 fluid drams tincture of cantharides and 2½ fluid ounces alcohol.

824. Beach's Alterative Syrup.

Drug. Circ.

Jamaica sarsaparilla, sliced 6 pounds.
 Guaiac wood, rasped..... 3 pounds.
 Sassafras bark..... 2 pounds.
 Elder flowers..... 2 pounds.
 Burdock root or seed..... 3 pounds.
 Yellow dock root, bruised.. 3 pounds.

825. Beecham's Pills.

Ind. Pharm.

Aloes 480 grains.
 Rhubarb 90 grains.
 Sodium sulphate..... 24 grains.
 Saffron, true..... 24 grains.

Make into 3-grain pills. These pills have long been known in England as Beauchamp's pills.

826. Belloc's Lozenges.

West. Drug.

Washed poplar coal..... 3 ounces.
 Sugar 9 ounces.
 Mucilage of tragacanth..... 1 ounce.

Lozenges are formed out of this mass, each lozenge to weigh 15 grains.

827. Compound Benedict Water.

Guaiac wood..... 100.0
 Sassafras wood..... 10.0
 Coriander seed,
 Anise seed..... 5.0
 Licorice root..... 20.0

Contuse the above ingredients and allow them to macerate in 1,500 parts of lime water for three days in a warm place; strain and filter.

828. Big G.

The New Idea says: The bottle contains four fluid ounces of a yellowish fluid of bitter slightly saline test. An examination made in our laboratory, shows the presence of boric acid or borax and berberine, the yellow alkaloid of hydrastis. No zinc sulphate or other astringent was found. No quantitative estimates were made.

829. Bismarck's Powder.

Pulvis Antiphlogisticus Infantum.
 Quinidine tannate..... 4 parts.
 Magnesia 0.5 parts.
 Powdered sugar..... 20 parts.
 Fennel sugar..... 5 parts.
 Powdered licorice..... 1 part.

830. Bloom of Youth.

Kilner.

Flake white..... 6 drams.
 Carmine (No. 40)..... ½ drams.
 Glycerine 2 drams.
 Rose water..... 7½ ounces.

Mix in a mortar. Shake before using and apply with sponge.

831. Mistura Alterans "Boeckl."

Potassium iodide..... 1 dram.
 Fluid extract conium..... 1 dram.
 Fluid extract phytolacca.... 1 dram.
 Peppermint water, quantity
 sufficient, ad..... 2 ounces.

832. Bogle's Hyperion Fluid.

Three Thousand Recipes.

To 8 ounces of 90 or 95 per cent alcohol, colored red with alkanet, add 1 ounce of castor oil; perfume with geranium and verbena.

833. Prof. Bouchut's Teething Syrup.

Am. Dr.

Muriate of cocaine,
 Borate of sodium, of each.. 1 part.
 Syrup of marshmallow.... 20 parts.
 Syrup of poppies..... 10 parts.

834. Bouquet d' Amour.

Am. Dr.

Oil of lavender, finest 1,200 grains.
 Oil of cloves, twice
 rectified 600 grains.
 Oil of rose..... 15 grains.
 Oil of bergamot..... 600 grains.
 Tincture vanilla..... 6 fl. ounces.
 Tincture ambergris.... 6 fl. ounces.
 Alcohol (deodorized)... 12½ pints.

835. Bradyerotine.

New Idea.

Caffeine alkaloid..... 6 grains.
 Potassium bromide..... 20 grains.
 Sodium bromide..... 20 grains.
 Syrup 3 fl. drams.
 Alcohol 2 fl. drams.
 Port wine, quantity sufficient, ad..... 13 fl. ounces.
 Caramel sufficient to color.

836. British Oil.

Parrish.

Oil of turpentine..... 4 fl. ounces.
 Oil of flaxseed..... 3 pints.
 Oil of amber..... 1 pint.
 Oil of juniper..... ½ fl. ounce.
 Petroleum (Barbadoes)... 2 ounces.
 Petroleum (American)... 2 ounces.

Mix them well together.

837. Bromidia.

Sci. Am. Cyc. Rec.

Bromide of potassium.. 4 troy ounces.
 Hydrate of chloral..... 4 troy ounces.
 Extract of hyoscyamus. 16 grains.
 Extract of cannabls
 indica 16 grains.
 Oil of anise..... 5 drops.
 Gum arabic..... ½ dram.

Water and syrup, of each equal parts, to make 16 fluid ounces of finished product.

Dissolve the bromide, chloral, hyoscyamus in a part of water. Rub the cannabis with the gum and some water, and make an emulsion. Mix all together, add the oil, the syrup, and the remainder of the water, and let stand 24 hours, with occasional shaking; then filter.

838. Bromochloralum.

Dr. Circ.

Chloride of aluminum..... 13 ounces.
Bromine,
Sulphate of lime, etc..... Traces.

839. Bromochloralum.

Kilner.

Alum, coarse powder, 1 pound.
Boiling water 2 pints.
Aqua ammonia, sufficient.
Muriatic acid, sufficient.
Bromine ½ ounce.
Water, sufficient.

Dissolve the alum in the boiling water. Add 2½ gallons of cold water and mix well; then add aqua ammonia until the odor of the ammonia can be detected in the mixture and a precipitate is formed. Allow it to settle and pour off the supernatant liquid. Put on fresh water again, stir well, allow to settle, and again pour off. Then place the precipitate upon a muslin strainer and drain well; put the precipitate in a closed vessel and carefully add the bromine; finally, add sufficient muriatic acid, a little at a time, to dissolve the precipitate, and then enough water to complete the measure of 1 gallon, and filter.

840. Chloralum Disinfectant.

Pharmacist.

Pulverized alum 10 ounces.
Solution calcium chloride 16 fl. ounces.
Water enough to make. 100 fl. ounces.

Dissolve the alum in four-fifths of the water by the aid of heat; add the solution of calcium chloride; filter, and add enough water to complete the quantity directed.

841. Chloralum (English).

Dr. Circ.

Chloride of aluminum..... 20 ounces.
Sulphate of lime..... ½ ounce.

842. Injection Brou.

New Idea.

Tincture catechu (1 in 16) 1 dram.
Cocaine murate 10 grains.
Lead acetate 10 grains.
Zinc sulphate 10 grains.
Water 6¾ fl. ounces.
Alcohol ½ fl. ounce.

Dissolve the mineral salts each in ½ ounce of water and mix them. Dilute the tincture catechu with 4 fluid ounces of water, add the minerals and then the solution of cocaine murate in an ounce of water, lastly the alcohol and water to make 7½ fluid ounces. The color of Injection Brou may be fairly well simulated by using a small amount of magenta.

843. Injection Brou.

Ch. & Dr.

Opium 0.50 grams.
Catechu 0.50 grams.
Saffron 1 gram.
Boiling water..... 100 grams.
Infuse, filter and add:
Acetate of lead..... 1.50 grams.
Sulphate of zinc..... 3 grams.

844. Brown's Bronchial Troches.

West. Dr.

Extract conium..... ½ ounce.
Powdered acacia..... 2 ounces.
Powdered cubeb..... 2 ounces.
Powdered extract of licorice 8 ounces.
Sugar 12 ounces.
Oil peppermint..... 3 minims.

Make into a mass with water. Mix thoroughly and divide into lozenges of about 30 grains each.

845. Brown's Troches.

Drug Hand Book.

Powdered extract of licorice ½ pound.
Powdered cubeb ½ pound.
Powdered white sugar ... 7 pounds.
Oil of peppermint 2 drams.
Mucilage of tragacanth, a sufficient quantity.

Rub the oil of peppermint with 1 ounce of sugar; add the remainder of the sugar. Triturate thoroughly, then incorporate the cubeb and licorice. When thoroughly mixed, add sufficient mucilage of tragacanth to form a mass. Divide into troches of suitable size.

846. Brown's Male Fern Vermifuge.

A good imitation is:

Fluid extract male fern.. 3 fl. ounces.
Oil wintergreen 1 minim.
Simple syrup 5 fl. ounces.

847. Bryan's Pulmonic Wafers.

Every-Day Wants.

Take white sugar, 7 pounds; tincture of syrup of ipecac, 4 ounces; antimonial wine, 2 ounces; morphine, 10 grains, dissolved in a tablespoonful of water, with 10 or 15 drops of sulphuric acid; tincture of blood-

root, 1 ounce; syrup of tolu, 2 ounces; add these to the sugar, and mix the whole mass as confectioners do for lozenges, and cut into lozenges the ordinary size.

848. Bucklin's Arnica Salve.

Nat. Dr.

Solid extract of arnica.... 2 ounces.
Resin cerate 16 ounces.
Vaseline 4 ounces.
Raisins (seedless) 16 ounces.
Fine-cut tobacco 1 ounce.
Water sufficient.

Boil the raisins and tobacco in 2 pints of water until they are exhausted; express the liquid and evaporate down to 8 ounces. Soften the arnica extract with a little hot water and mix the liquid with it. Melt the resin cerate and vaseline together, and add the liquid to the melted mass. Incorporate thoroughly and let cool.

849. Buckley's Ointment.

Kilner.

Vaseline 4 ounces.
Simple cerate 4 ounces.
Iodoform 4 drams.
Carbolic acid 2 drams.

Rub the iodoform with the vaseline; add cerate; rub to a smooth mass, and lastly add the carbolic acid.

850. Buffalo Lithia Water.

Bulletin of the U. S. Geological Survey, 1886.

The water is alkaline, calcic and chalybeate, and contains in each imperial gallon:

	Spring	Spring	Spring
	No. 1	No. 2	No. 3
Calcium bicarbonate.....	39.28	14.96	2.52
Potassium carbonate.....	29.30	1.85	
Lithium bicarbonate.....	1.48	2.25	...
Barium bicarbonate.....	1.75
Iron bicarbonate.....	0.50	0.30	3.77
Calcium sulphate.....	19.25	33.07	2.35
Magnesium sulphate.....	1.53	0.89	0.15
Potassium sulphate.....	0.46
Aluminum sulphate.....	8.18	9.07	3.04
Sodium chloride.....	1.26	4.92	0.22
Lithia	trace
Silica	1.72	1.87	0.57
Iodine	trace	trace	...
Phosphoric acid.....	trace	trace	trace
Organic matter.....	trace	trace	trace
Total.....	73.66	98.38	11.47
	Cubic	Cubic	Cubic
Gases.	in.	in.	in.
Carbonic acid.....	69.1	59.2	11.6
Sulphureted hydrogen.....	5.9	8.3	3.4

851. Bumsted's Gleet Cure.

West. Drug.

Zinc sulphate 10 grains.
Extract opium, aqueous.... 1 dram.
Fluid hydrastis 1 dram.
Glycerine 4 drams.
Water 4 ounces.

852. Bumstead's Mixture.

Kilner.

Balsam copaiba ½ ounce.
Tincture chloride iron..... 2 drams.
Tincture cantharides..... 2 drams.
Syrup acacia, to make..... 4 ounces.

853. Burnett's Cocaine.

West. Dr.

Cocoonut oil 4 ounces.
Cologne water 4 ounces.

854. California Fig Syrup.

Formulary.

Figs, chopped fine 8 ounces.
Dates, without seeds,
chopped 4 ounces.
Buckthorn bark, in coarse
powder 8 ounces.
Senna leaves, cut or
bruised 8 ounces.
Cascara bark, coarse pow-
der 8 ounces.
Bicarbonate of sodium 1 ounce.
Rochelle salts 4 ounces.
Sugar 6 pounds.
Oil of anise 15 minims.
Oil of peppermint 15 minims.
Oil of wintergreen 10 minims.
Oil of cloves 20 minims.
Alcohol 20 fl. ounces.
Water, a sufficient quantity.

855. Laxative Fruit Syrup.

Figs 4 ounces.
Sugar 12 ounces.
Water, a sufficiency.

Bruise the figs in a clean iron mortar, add ½ pint boiling water, and after digesting 1 hour strain the mixture through a hair sieve or coarse flannel. To the expressed liquid add the sugar and heat the mixture upon a water-bath for 12 hours. Finally, strain and add enough water, if necessary, to make the syrup measure a pint.

856. Laxative Fruit Syrup.

Senna leaves 2 troy ounces.
Buckthorn bark 128 grains.
Jalap 384 grains.
Rhubarb 256 grains.
Cinnamon 30 grains.
Cloves 30 grains.
Nutmeg 15 grains.
Oil peppermint 20 minims.
Sugar 12 troy ounces.
Diluted alcohol q. s. for 16 fl. ounces.

Reduce the drugs to a moderately fine (No. 50) powder, add to it the oil of peppermint and percolate it in the usual way.

857. Carlsbad Salts.

Hager.

Dried sodium sulphate	25.0
Sodium chloride	2.5
Sodium bicarbonate	5.0

858. Carlsbad Salts.

Arch.

Crystallized sodium sulphate, 55.556 per cent; potassium sulphate, 1.11; sodium chloride, 10; sodium hydrogen carbonate, 33.33 per cent. The specific gravity of a solution of 25 grams of the anhydrous salt in 200 cubic centimeters of water, or of 45 grams of the hydrated salt in 200 cubic centimeters of water, should be 1.1037 at 15 degrees C.

859. Carlsbad Salt, Artificial.

Fenner.

Sodium sulphate, cryst.. ..	5 parts.
Sodium carbonate, cryst....	5 parts.
Sodium chloride.....	1 part.
Hot water.....	12 parts.

Dissolve, filter and evaporate till a film begins to form, and set aside to crystallize. Separate the crystals from the mother liquor, and transfer them, without washing, to bottles. Efflorescent, soluble in 2½ parts water.

860. Carter's Little Liver Pills.

New Idea.

Podophyllin	1½ grains.
Aloes (socotrine).....	3½ grains.
Mucilage of acacia, quantity	sufficient.
Mix, divide into 12 pills and coat with	sugar.

861. Cascara Cordial.

Cascara sagrada.....	100.	grams.
Berberis aquifolium....	37.	grams.
Diluted alcohol.....	233.	grams.
Coriander	17.	grams.
Angelica root.....	2.	grams.
Oil of anise,		
Oil of orange, of each..	13.	grams.
Oil of cassia.....	.005	grams.
Granulated sugar.....	283.	grams.
Fluid extract licorice..	12.	grams.
Tincture cudbear, quantity	sufficient.	
Water.....	enough to make	1 litre.

Make a decoction of the cascara sagrada at 212 degrees F., and when cold filter; then dissolve the sugar in the resulting filtrate. Pack the coriander, berberis and angelica (previously reduced to a coarse

powder) in a percolator and displace with diluted alcohol, in which the oils have been previously dissolved.

Lastly mix the cascara solution, the aromatic tincture and the tincture of cudbear together, and then add the fluid extract of licorice and enough water to make the product measure one litre.

862. Castoria (Pitcher's).

West. Drug.

Senna	2 av. ounces.
Pumpkin seed.....	6 drams.
Rochelle salts.....	4 drams.
Wormseed, Levant.....	3 drams.
Sodium bicarbonate.....	2 drams.
Anise seed.....	1 dram.
Oil of gaultheria.....	½ dram.
Oil of peppermint.....	½ dram.
Sugar	8 av. ounces.
Water, quantity sufficient	to make.....
	16 fl. ounces.

Exhaust the vegetable drugs by boiling with water, evaporate to the proper volume, and dissolve the sugar and other ingredients.

863. Castoria.

Bull. Pharm.

Fluid extract of Alexandria senna.....	1½ fl. ounces.
Fluid extract of Levant wormseed	3 fl. drams.
Fluid extract of peppermint	2 fl. drams.
Fluid extract of anise seed	3 fl. drams.
Oil of wintergreen.....	2 minims.
Rochelle salt.....	6 drams.
Sodium bicarbonate....	1 dram.
White sugar.....	2 ounces.
Molasses	½ fl. ounce.
Alcohol	2 fl. ounces.
Water, sufficient to make	6½ fl. ounces.

Mix the fluid extracts, the oil and the alcohol, and add to the mixture the remaining ingredients.

864. Celery Compound.

Kilner.

Celery seed.....	384 grains.
Catnip herb	640 grains.
Chamomile, German.....	384 grains.
Alcohol, diluted, sufficient.	
Simple elixir to make....	1 pint.

Percolate drugs with diluted alcohol till four ounces is obtained, then add elixir and filter. Each fluid dram contains three grains each of celery and chamomile, and five grains catnip herb.

865. Centaur Liniment (For Man).
New Idea.

Oil pennyroyal..... $\frac{1}{2}$ ounce.
 Oil thyme..... $\frac{1}{4}$ ounce.
 Oil turpentine..... $\frac{1}{4}$ ounce.
 Soap 130 grains.
 Caustic soda..... 10 grains.
 Water to make..... 1 pint.

866. Chamberlain's Relief.
New Idea.

Tincture capsicum, about.. 1 ounce.
 Spirit camphor, about..... $\frac{3}{4}$ ounce.
 Tincture guaiac, about..... $\frac{1}{4}$ ounce.
 Color tincture, quantity sufficient.

867. Christodoro's Hair Dye.
Three Thousand Recipes.

No. 1. To 1 ounce of pyro-gallic acid, dissolved in 1 ounce alcohol, add 1 quart soft water.

No. 2. To 1 ounce crystallized nitrate of silver, dissolved in 1 ounce concentrated aqua-ammonia and 1 ounce soft water, add $\frac{1}{2}$ ounce gum arabic and 3 ounces soft water. Keep covered from the light.

868. Chandler's Chlorodyne.
Am. Dr.

Hydrochlorate of morphine 16 grains.
 Alcohol 10 drams.
 Glycerine 13 drams.
 Fluid extract of cannabis indica 4 drams.
 Chloroform 4 drams.
 Tincture of capsicum..... 32 minims.
 Oil of peppermint..... 16 minims.

869. Chlorodyne (Maltbie's).

Morphine hydrochlorate.. 16 grains.
 Alcohol 12 fl. drams.
 Tincture cannabis indica. 4 fl. drams.
 Oil peppermint..... 6 minims.
 Tincture capsicum..... 15 minims.
 Chloroform 4 fl. drams.
 Dilute hydrocyanic acid.. 1 fl. dram.
 Glycerine to make 4 fluid ounces.

The morphine is dissolved in the alcohol and the other ingredients added in the order named.

870. Chlorodyne.
Can. Dr.

Essence peppermint..... 2 drams.
 Spirit camphor..... 2 drams.
 Spirit chloroform..... 2 drams.
 Tincture capsicum..... 2 drams.
 Tincture ginger..... 2 drams.
 Tincture catechu..... 6 ounces.
 Tincture digitalis..... 1 ounce.
 Hydrocyanic acid dilute.... 2 drams.
 Glycerine 3 ounces.
 Alcohol 2 ounces.

871. Chlorodyne.
Hung. Pharm.

Extract of cannabis indica $1\frac{1}{2}$ grains.
 Acetic ether, sufficient quantity.
 Chloroform 60 minims.
 Tincture of ginger..... 200 minims.
 Syrup of orange peel..... 70 minims.

Dissolve the extract of cannabis indica by rapid trituration in 30 drops of the acetic ether, and add the syrup of orange peel. Then gradually incorporate, while stirring, the tincture of ginger, transfer the mixture to a bottle, and add the remainder of the acetic ether and the chloroform. Keep in a well closed bottle. It should have a greenish-yellow color and remain free from sediment.

872. Chlorodyne.
A. P. A.

Sulphate of morphia..... 80 grains.
 Dilute hydrocyanic acid. $\frac{1}{2}$ fl. ounce.
 Glycerine $\frac{1}{2}$ fl. ounce.
 Caramel $\frac{1}{2}$ fl. ounce.
 Extract of Indian hemp.. 2 scruples.
 Oil of peppermint..... $\frac{1}{2}$ ounce.
 Oleo-resin of capsicum... 15 drops.
 Chloroform 6 fl. ounces.
 Alcohol 1 fl. ounce.

Mix.

873. Chlorodyne (Shaw's).
A. P. A.

Extract of cannabis indica 8 grains.
 Morphine acetate..... 4 grains.
 Oil of capsicum..... 1 scruple.
 Oil of peppermint..... 1 scruple.
 Hydrocyanic acid..... 1 scruple.
 Chloratic ether..... 4 drams.
 Molasses $1\frac{1}{2}$ drams.
 Vinegar $\frac{1}{2}$ dram.

Dissolve the resin and the oils in the ether, mix the solution of the morphine in the vinegar with the molasses, add the ethereal solution and at last the acid; keep in dark bottles in a cool place.

874. Chlorodyne Substitute.

Saffron 2 drams.
 Rectified spirit..... 10 ounces.
 Glycerine 10 ounces.

Mix, and macerate for three days and strain. To 16 fluid ounces of the strained liquor add

Hydrochlorate of morphine 3 drams.

Dissolve and add

Oil of aniseed..... $1\frac{1}{2}$ drams.
 Tincture of capsicum... $1\frac{1}{2}$ ounces.
 Oil of peppermint..... 3 drams.
 Ethereal oil..... $1\frac{1}{2}$ ounces.
 Oil of amber..... $1\frac{1}{2}$ drams.

Mix.

875. Choppart's Balsamic Mixture.
Kilner.

Sweet spirit niter..... 1 dram.
 Balsam copalba..... 8 drams.
 Alcohol 8 drams.
 Spearmint water..... 8 drams.
 Orange flower water..... 8 drams.
 Syrup of orange peel..... 8 drams.

876. Clarke's Blood Mixture.
Dr. Circ.

Iodide of potassium..... 64 grains.
 Chloric ether..... 4 drams.
 Solution potassa..... 30 minims.
 Water 7½ ounces.
 Burnt sugar, sufficient to color.

The chloric ether here mentioned is made by dissolving one part by volume of chloroform in nineteen parts by volume of alcohol. The solution potassa is a solution of caustic potassa of specific gravity 1.058.

877. Coaline Headache Powders.
Formulary.

Similar powders may be made as follows:

Antipyrine 60 grains.
 Bromide of sodium..... 120 grains.
 Powdered sugar..... 300 grains.

Mix them intimately and divide into 12 powders.

878. Coe's Dyspepsia Cure.
Kilner.

Fluid extract yellow root.. 4 ounces.
 Fluid extract wild cherry.. 2 ounces.
 Bicarbonate soda 2 ounces.
 Essence peppermint 1 ounce.
 Simple syrup 18 ounces.

879. Coe's Dyspepsia Cure.
New Idea.

Rhubarb 2 drams.
 Fluid extract gentian..... 3 drams.
 Peppermint water..... 7½ drams.
 Soda bicarbonate..... 6 drams.

880. Dr. Cole's King of Oils.
Three Thousand Recipes.

One ounce green copperas; 2 ounces white vitriol; 2 ounces common salt; 2 ounces linseed oil; 8 ounces molasses. Boil over a slow fire 15 minutes in a pint of urine; when almost cold, add 1 ounce of oil of vitriol and 4 ounces of spirits of turpentine.

881. Coleman's Liebig's Extract of Malt and Malt Wine.

Ztsch.

Specific gravity at 15 degrees C., 1.0278.
 100 cubic centimeters contain:
 Extract 13.39 grams.
 Alcohol 15.55 grams.
 Invert sugar..... 9.50 grams.
 Cane sugar..... none.

Free acid (tar-
 taric) 0.367 grams.
 Nitrogenous sub-
 stances 0.449 grams (N.x6.29).
 Mineral matter... 0.333 grams.
 Phosphoric acid.. 0.072 grams.
 Sulphuric acid... 0.026 grams.
 Chlorine 0.019 grams.

The wine contained beside, considerable amount of salicylic acid, but no meat or malt extract.

882. Conklin's Salve.
Kilner.

Resin 12 ounces.
 Wax 1 ounce.
 Tallow 1 ounce.
 Mutton tallow..... 1 ounce.

Melt together and pour into cold water. Work with the hands in the water, and when cool enough, form into rolls.

883. Condray's Eau de Quinine.
Pharm. Ztg.

Tincture cinchona bark, 50 parts; tincture cantharides, 25 parts; spirit of soap, 100 parts; cologne water, 250 parts; alcohol (95 degrees), 250 parts; balsam of Peru, 20 parts; oil of bergamot, oil of sweet orange, each 10 parts; oil of geranium, 3 parts; with sufficient French brandy to make 2,000 parts; all mixed together, and the whole colored with cochineal.

884. Cram's Fluid Lightning.
New Idea.

Oil mustard,
 Oil cajuput,
 Oil cloves,
 Oil sassafras, of each... 2 fl. drams.
 Ether 1 fl. ounce.
 Tincture opium 1½ fl. ounces.
 Alcohol 20 fl. ounces.

Mix and filter.

885. Crevoisier Asthma Powder.
Bull. Pharm.

Powdered belladonna leaves,
 Powdered foxglove,
 Powdered stramonium,
 Powdered sage,
 Powdered nitrate of potash,
 Of each equal parts.

To prevent too rapid burning, moisten slightly the powder, or press it into tablets.

886. Cuticura Resolvent.
Kilner.

Aloes socotrine 1 dram.
 Rhubarb, powdered, 1 dram.
 Iodide potassium 36 grains.
 Whisky 1 pint.
 Macerate over night and filter.

887. Darby's Prophylactic Fluid.

Dr. Circ.

Permanganate of potassium	35 grains.
Sulphate of potassium ..	2½ ounces.
Carbonate of potassium	10 ounces.
Chloride of potassium....	2 ounces.

888. Perry Davis' Pain Killer.

New Idea.

Gum myrrh	2¼ pounds.
Capsicum	10 ounces.
Gum opii	8 ounces.
Gum benzoin	6 ounces.
Gum guaiac	3 ounces.
Gum camphor	10 ounces.
Alcohol	5 gallons.

889. Perry Davis' Pain Killer.

Pierson. New Idea.

Spirit of camphor, about	2 ounces.
Tincture of camphor, about	1 ounce.
Tincture guaiac, about ..	1½ ounces.
Tincture myrrh, about ..	½ ounce.
Alcohol, about	3 ounces.

890. Perry Davis' Pain Killer.

Rogers. New Idea.

Alkanet root	1 ounce.
Myrrh, powdered,	3 ounces.
Guaiac (resin)	2 ounces.
Camphor	1 ounce.
Tincture opium	4 drams.
Capsicum	4 drams.
Alcohol	2 pints.
Water	2 pints.
Macerate for several days and filter.	

891. Day's Pain Banisher.

Kilner.

Alcohol	6 pints.
Red pepper	3 ounces.
Gum camphor	2½ ounces.
Oil of origanum	1½ ounces.
Tincture of opium	1½ ounces.
Yerba santa	1 ounce.
Ether	6 ounces.
Water	3 pints.
Peruvian bark	½ pound.
Ginger	¼ ounce.
Chloroform	1 dram.
Sarsaparilla	¼ pound.
Mix.	

892. Diamond Oil.

H. L. Loomis.

Alcohol	1 pint.
Water of ammonia	2 ounces.
Chloroform	1 ounce.
Sulphuric ether	2 ounces.
Tincture capsicum	1 ounce.

Spirits camphor	1 ounce.
Oil origanum	2 drams.
Oil hemlock	2 drams.
Oil wormwood	2 drams.
Oil sassafras	2 drams.

893. Madame Dornier's Liquid Cosmetic.

Nat. Dr.

Alum	4 parts.
Tanbark	4 parts.
Anise	8 parts.
Thyme	8 parts.
Sage	8 parts.
Rosemary	8 parts.
Hyssop	8 parts.
Lavender	8 parts.
Absinthemum	8 parts.
Peppermint	8 parts.
Camphor	8 parts.
Alcohol 45 degrees,	1,000 parts.
Infuse for 15 days, after which filter.	

894. Edison Polyform Composition.

A. P. A.

Morphine sulphate	6 grains.
Chloral hydrate	1 ounce.
Camphor	1 ounce.
Alcohol	2 ounces.
Chloroform	1 fl. ounce.
Ether	1 fl. ounce.
Tincture of aconite	1 fl. ounce.
Oil of peppermint	2 drams.

895. Edison Polyform Composition.

A. P. A.

Chloroform	2 fl. ounces.
Ether	1 fl. ounce.
Alcohol	1½ fl. ounces.
Chloral hydrate	2 ounces.
Camphor	1 ounce.
Morphine sulphate	6 grains.
Oil of peppermint	1 fl. dram.

896. Edwards' Alternative and Tonic Bitters.

Dr. News.

Fluid extract hops	16 fl. ounces.
Fluid extract red cinchona	8 fl. ounces.
Fluid extract sarsaparilla	6 fl. ounces.
Fluid extract hydrastis..	6 fl. ounces.
Fluid extract mandrake	4 fl. ounces.
Oil wintergreen	6 fl. drams.
Oil sassafras	3 fl. drams.
Oil peppermint	2 fl. drams.
Oil lemon	2 fl. drams.
Sugar	6 pounds.
Alcohol	2 gallons.
Water, enough to make..	12 gallons.

897. Elliman's Embrocation.

Chem. & Drug.

White of egg	2 parts.
Turpentine	8 parts.
Crude pyroligneous acid	50 parts.
Water	50 parts.
Spirit (methylated)	60 parts.

898. Elliman's Royal Embrocation.

New Idea.

Oil turpentine	½ ounce.
Oil thyme.....	⅓ ounce.
Oil amber crude.....	⅓ ounce.
Soap	130 grains.
Caustic soda.....	10 grains.
Water, quantity sufficient..	1 pint.

899. Ely's Cream Balm.

Am. Dr.

Thymol	1 part.
Oil wintergreen.....	2 parts.
Bismuth subnitrate.....	65 parts.
White saxolin.....	2,132 parts.

900. Ely's Cream Balm.

New Idea.

White wax.....	60 parts.
Paraffin	30 parts.
Oil of sweet almond.....	120 parts.
Petrolatum	240 parts.
Nitrate of sodium.....	30 parts.
Water	30 parts.
Oil of lemon.....	10 parts.
Oil of orange	2 parts.

Melt the wax, paraffin and petrolatum and add the oil of almond; dissolve the nitrate in the water and add to the foregoing with constant stirring; and lastly, when nearly cold, add the oils of lemon and orange.

901. Ely's Cream Balm.

Bull. of Pharm.

The following is a good substitute:

Vaseline	1 ounce.
Thymol	3 grains.
Carbonate bismuth.....	15 grains.
Oil wintergreen.....	2 minims.

902. Engling's Essence Rennet.

West. Dr.

Calves' rennets, fresh, No. 20. Separate the mucus lining by scraping the inner side of the rennets with a blunt knife, and place the scrapings into a 10-liter bottle. Then add:

Glycerine	1.5 kilograms.
Sodium chloride.....	800.0 grams.
Water enough to fill the bottle.	

Set the mixture aside in a cool, dark place for 6 days, strain, and to the liquid

obtained add, before filtering, 200 grams of kaolin or talc. Liquid rennet must be preserved in small vials, well sealed, and stored in a cool, dark place.

903. Eno's Fruit Salt.

New Idea.

Soda bicarbonate.....	168 parts.
Tartaric acid.....	150 parts.
Rochelle salt.....	110 parts.

904. Esmarch's Painless Cancer Powder.

Ch. & Dr.

Arsenious acid.....	10 grains.
Muriate of morphia.....	10 grains.
Calomel	80 grains.
Powdered gum arabic.....	1 ounce.

905. Espey's Fragrant Cream.

Am. Pharm.

Linseed	20 ounces.
Boracic acid	20 grains.
Distilled water	1 gallon.
Cologne	2 ounces.

Macerate the seed in the water, in which the acid has previously been dissolved, for 3 days, with frequent agitation. Strain through muslin and add cologne.

906. Espey's Fragrant Cream.

Am. Pharm.

Linseed	20 ounces.
Salicylic acid	25 grains.
Distilled water	1 gallon.
Glycerine	1 pint.
Alcohol	24 ounces.
Carbolic acid	1½ drams.
Cologne	2 ounces.

907. Espey's Fragrant Cream.

New Idea.

Mucilage of quince seed, 100; borax, 2; dissolved in a little water (4); glycerine, 6; alcohol, 3, in which oil bergamot, finest, hand-pressed, (1), has been dissolved.

908. Excelsior Disinfectant.

Dr. Circ.

Ferrous sulphate	5 ounces.
Chloride of sodium	3 ounces.
Flowers of sulphur.....	1¼ ounces.

909. Fahnestock's Vermifuge.

New Idea.

Castor oil	48 parts.
Oil wormseed	48 parts.
Oil anise	24 parts.
Oil turpentine	1 part.
Tincture myrrh	3 parts.

910.

Firwein.

New Idea.

Solution bromine, iodine and phosphorus	1 ounce.
Fir bark in coarse powder	1 ounce.
White pine bark, coarse powder	$\frac{1}{2}$ ounce.
Tamarac bark, coarse powder	$\frac{1}{2}$ ounce.
Dilute alcohol	16 fl. ounces.
Sugar	4 ounces.

Percolate the barks with the dilute alcohol until 13 fluid ounces are obtained; remove the tannin; add the solution bromine, iodine and phosphorus. Dissolve the sugar, allow it to stand 24 hours, and filter. The solution bromine, iodine and phosphorus is made of phosphorus, 10 grains; iodine and bromine, of each 170; alcohol, 1 fluid ounce; glycerine, q. s. to make 8 fluid ounces. Dissolve the iodine in the alcohol, then add the glycerine, then bromine, and lastly the phosphorus, gradually, in fine shavings. Use great care in adding the phosphorus. One ounce of this for the above Firwein.

911. Fellows' Syrup of Hypophosphites.

Br. & Col. Dr.

Strychnine	1 grain.
Quinine	40 grains.
Manganese hypophosphite	40 grains.
Hypophosphorous acid....	110 grains.

Dissolve in 1 ounce distilled water, and filter.

Sodium hypophosphite....	160 grains.
Calcium hypophosphite....	160 grains.
Solution hypophosphite of iron	3 ounces.

Dissolve and filter, mix the two filtrates, add 4 ounces glycerine and sufficient simple syrup to bring the whole up to 1 pint.

912. Fellows' Syrup of Hypophosphites.

Glucose	1 pound.
Simple syrup	1 pint.
Hypophosphite of calcium	128 grains.
Hypophosphite of potassium	48 grains.
Sulphate of iron	48 grains.
Sulphate of manganese....	32 grains.
Sulphate of quinine.....	14 grains.
Sulphate of strychnine....	2 grains.
Water, q. s.	2 pints.

Dissolve the calcium hypophosphite and potassium hypophosphite in 2 fluid ounces of the water. Add to 1 ounce of the water 3 fluid drams of syrup and dissolve in the

mixture, by aid of heat, the remainder of the salts. Mix the solutions and set by for a few hours, covered, until the deposit of calcium sulphate subsides. Filter into a bottle containing the remainder of the syrup; wash the residue with 1 ounce of boiling water; mix filtrates and washings with the syrup. Dissolve the glucose in the mixture and add enough water to make the preparation measure 2 pints.

913. Fellows' Syrup of Hypophosphites.

Iron pyrophosphate.....	15 grains.
Sodium hypophosphite....	45 grains.
Quinine sulphate.....	5 grains.
Strychnine (dissolved)	$\frac{1}{2}$ grain.
Syrup, sufficient to make.	16 ounces.

This formula has been criticised severely.

914. Fellows' Syrup of Hypophosphites.

Hypophosphite of calcium	740 grains.
Hypophosphite of sodium	256 grains.
Hypophosphite of potassium	192 grains.
Hypophosphite of manganese	192 grains.
Sulphate of iron (crystals)	370 grains.
Strychnine	4 grains.
Sulphate of quinine....	128 grains.
Sugar	24 troy ounces.
Orange flower water....	1 fl. ounce.
Diluted sulphuric acid,	
Diluted hypophosphorous acid.	
Water of ammonia,	
Distilled water,	
Of each, sufficient quantity.	

Dissolve 228 grains hypophosphite calcium in 4 fluid ounces distilled water, and the sulphate of iron in 2 fluid ounces water; mix and filter. Dissolve the remainder of hypophosphite calcium with the other hypophosphites in 4 fluid ounces hot water, using about 1 to 2 fluid drams diluted hypophosphorous acid to aid solution, mix the two solutions and set aside. Dissolve the strychnine in 2 drams water, by aid of few drops of hypophosphorous acid, and again mix with the other solutions. Now dissolve the quinine sulphate in about 8 ounces water, using a little diluted sulphuric acid, precipitated with sufficient diluted ammonia (1 part ammonia to 6 of water) until the ammonia is in slight excess. Wash the precipitate and transfer to a mortar, rub to a paste, gradually add diluted hypophosphorous acid to perfect solution and add to the other solution, making the whole measure about 16 fluid

ounces. To this add the orange flower water and sugar and dissolve cold, by shaking. Lastly filter, add water to make the whole measure 32 fluid ounces. Each fluid dram contains hypophosphite calcium, 2 grains; sodium, 1 grain; potassium, $\frac{3}{4}$ grain; manganese, $\frac{3}{4}$ grain; iron, $\frac{3}{4}$ grain; quinine, $\frac{1}{2}$ grain; strychnine, 1-64 grain.

915. Flag's Relief.

Oil cloves, about..... 1 dram.
Oil sassafras, about..... 2 drams.
Spirit camphor, about..... $1\frac{1}{2}$ drams.

916. Flanders' Diffusible Tonic.

West. Drug.

Cinchona 160 grains.
Extract hydrastis 40 grains.
Alcohol 4 fl. ounces.
Water, quantity sufficient to make..... 16 fl. ounces.

917. Saline Chalybeate Tonic.

Austin Flint.

It is usually prescribed in pill or tablet form; each pill contains the following:

Sodium chloride..... 3 grains.
Potassium chloride..... 3-20 grain.
Potassium sulphate..... 1-10 grain.
Magnesium carbonate.... 1-20 grain.
Sodium carbonate..... 3-5 grain.
Magnesium carbonate.... 1-10 grain.
Calcium phosphate precip. $\frac{1}{2}$ grain.
Calcium carbonate precip. 1-20 grain.
Iron by hydrogen..... 9-20 grain.
Iron carbonate..... 1-20 grain.

918. Fonsagrives' Tonic Wine.

Nat. Dr.

Extract of cinchona..... 6 parts.
Tincture of nux vomica.... 2 parts.
Bordeaux wine (claret).... 450 parts.
Syrup of bitter orange peel. 90 parts.

919. Ford's Balsam of Horehound.

New Idea.

Horehound herb..... $3\frac{1}{2}$ pounds.
Licorice root..... $3\frac{1}{2}$ pounds.
Water 8 pints.

Infuse for 12 hours, then strain off 6 pints. To these add:

Camphor 10 drams.
Opium 1 ounce.
Benzoin 1 ounce.
Dried squills..... 2 ounces.
Oil of aniseed..... 1 ounce.
Alcohol 12 pints.

Macerate for one week, and then add $3\frac{1}{4}$ pounds of honey.

920.

Franconia Liquid.

Am. Dr.

Prepare a thick, almost jelly-like infusion of flaxseed, and add to it 20 per cent of its volume of glycerine, with which has been mixed sufficient salicylic acid to make the finished product contain 2 grains in each fluid ounce. Perfume according to taste.

921.

Freligh's Tonic.

New Idea.

Fluid extract nux vom- 300 minims.
ica
Fluid extract ignatia... 150 minims.
Fluid extract cinchona
(yellow) $12\frac{1}{2}$ ounces.
Fluid extract matricaria $36\frac{1}{2}$ drams.
Fluid extract gentian... $\frac{1}{8}$ ounce.
Fluid extract bitter orange 30 minims.
Fluid extract columbo.. 75 minims.
Fluid extract cardamoms $\frac{1}{2}$ fl. dram.
Phosphorus $5\frac{1}{3}$ grains.
Spirit orange (1 in 8).... 30 minims.
Spirit cloves (1 in 8).... 15 minims.
Spirit cassia (1 in 8).... 15 minims.
Alcohol 6 fl. ounces.
Simple syrup..... 8 fl. ounces.
Water, quantity sufficient ad..... 2 pints.

Dissolve the phosphorus in the alcohol, add the spirits of essential oils, the fluid extracts, the simple syrup, and lastly water to make 2 pints, filter, and wash filter with water to make 2 pints of finished product.

922.

Frey's Vermifuge.

Kilner.

Castor oil..... 1 ounce.
Aromatic syrup rhubarb.... 1 ounce.
Oil wormseed..... 30 drops.
Croton oil..... 3 drops.

923.

German Syrup.

Kilner.

Oil of tar..... 1 dram.
Fluid extract ipecac..... 4 drams.
Tincture of opium..... 4 drams.
Fluid extract wild cherry.. 6 ounces.
Water..... 8 ounces.
Sugar 14 ounces.
Carbonate of magnesia.... 3 drams.

Rub the oil thoroughly with carbonate of magnesia in a mortar, mix the fluid extract with the water and triturate with the mixture in the mortar. Filter it until clear, having previously dissolved the sugar in the water.

924. Fuller's Restribution Fluid.

New Idea.

For washing (bathing) the legs of steple-chasers.

Acetic acid.....	50
Muriate ammonia.....	25
Tincture aconite root.....	100
Tincture asafoetida.....	25

Mix with plenty of water and use for bathing legs of steplechasers.

925. Gesnouin's Syrup.

Griffiths.

Syrup of sarsaparilla.....	4 pounds.
Syrup senna.....	3 ounces.
Extract of borage.....	5 ounces.
Conserve of elder berries...	1 ounce.

Mix, with heat.

926. Sirop Gilbert.

Biniodide of mercury....	2 grains.
Potassium iodide.....	100 grains.
Syrup	6 fl. ounces.

927. Gibler's Pills for Diarrhoea.

Am. Dr.

Sulphate of quinine.....	1/3 grain.
Extract of aconite.....	1/2 grain.
Tannic acid.....	1/2 grain.
Extract of opium.....	1-6 grain.
Mucilage of quince, sufficient quantity.	

Powdered licorice, sufficient quantity.

Make one pill.

928. Gilt Edge Butter Compound.

West. Dr.

The powder has been examined and found to consist of 29.50, per cent of pepsin and 70.50 per cent of a hydrous sodium sulphate, besides a trace of some pink coloring material. To use, 1 gram of the powder is stirred in 1 pint of fresh milk of blood temperature, and then sufficient salt and 1 pound of fresh butter are added. On churning, the product, closely resembling pure butter, will be found to weigh 2 pounds.

929. "Gipsy" Complexion Water.

Can. Dr.

Freshly-made rose water	1 pint.
Freshly-made thyme water	1 pint.
Milk-wort	2 small heads.
Dock leaves.....	2
Borax	1/4 ounce.

Bruise the fresh leaves with the borax, mix all the ingredients, allow them to macerate for forty-eight hours, then strain the liquid for use.

930. Goddard's Cosmetic Lotion.

Dr. Circ.

Tincture benzoin.....	2 fl. drams.
Corrosive sublimate.....	6 grains.
Rose water.....	6 fl. ounces.

931. Godfrey's Cordial.

Cooley.

Opium (sliced), 1/4 ounce; sassafras chips, 1 ounce; English brandy, 1 quart; macerate for four or five days; then add, of water, 1 quart; treacle, 3 1/2 pounds, and simmer the whole gently for a few minutes; the next day decant the clear portion.

932. Godfrey's Cordial.

Ch. & Dr.

Fourteen ounces theriac, 3 drams potassium carbonate, 10 drops oil anise, 10 drops oil caraway, 10 drops oil sassafras, 2 ounces alcohol, 1 1/2 ounces tincture opium, 11 ounces warm water. This has the advantage over the original of being made in one operation, by simply shaking the ingredients together in a wide-mouthed bottle, the water being sufficiently warm to dissolve the theriac.

933. Golden Oil.

Charles J. Huber.

Oil hemlock.....	1 ounce.
Oil sassafras.....	1 ounce.
Oil origanum.....	1 ounce.
Oil cedar.....	1 ounce.
Camphor	4 ounces.
Pure linseed oil.....	1 gallon.

Mix and let stand until the camphor is dissolved, and then strain.

934. Golden Oil.

R. H. Wildman, of Mobile, Ala.

Oil cedar.....	2 drams.
Oil spike.....	2 drams.
Oil hemlock.....	2 drams.
Oil sassafras.....	2 drams.
Oil wormseed (?).....	2 drams.
Oil origanum.....	2 drams.
Camphor	2 drams.
Linseed oil.....	1 pint.

935. Golden Oil.

E. C. Martin.

Oil hemlock.....	2 ounces.
Oil cedar.....	2 ounces.
Oil cajuput.....	2 ounces.
Spirit camphor.....	1 ounce.
Oil sassafras.....	1/2 ounce.
Linseed oil.....	1/2 gallon.

936. Gombault's Caustic Balsam.

Mix 3 ounces oil of turpentine, 15 drops oil of thyme, $\frac{1}{2}$ dram oil of rosemary and $\frac{1}{2}$ dram oil of amber. Very cautiously add 6 drams sulphuric acid, allowing the action to cease after each small addition, then set aside uncovered for six hours, and add 2 drams camphor, $\frac{1}{2}$ ounce tincture cantharides, and sufficient sulphureted linseed oil to make 8 ounces. The latter ingredient is made by adding 16.6 parts sublimed sulphur to 100 parts of linseed oil, and heating the whole to a brownish black liquid. Take care to avoid explosions or other accidents.

937. Gombault's Caustic Balsam.

Mix 4 drams croton oil with 2 fluid ounces cottonseed oil, add 20 minims of sulphuric acid gradually, under thorough stirring, and finally 2 fluid drams oil of turpentine, $\frac{1}{2}$ fluid dram oil of thyme, 1 fluid dram oil of camphor, 4 fluid drams kerosene.

938. Gombault's Caustic Balsam.

New Idea.

Sulphurated oil.....	2,190 parts.
Oil turpentine.....	340 parts.
Camphor	20 parts.
Alcohol	30 parts.
Sulphuric acid.....	90 parts.
Oil of red thyme.....	3 parts.
Oil of rosemary leaves....	10 parts.
Oil of amber (rectified)....	8 parts.

The alcohol may be replaced with alcoholic tincture of cantharides (1 to 10).

939. Good Samaritan Balm.

Am. Pharm.

Linseed oil.....	16 ounces.
Camphor	1 dram.
Oil cajuput.....	1 dram.
Oil cedar	1 dram.
Oil origanum.....	1 dram.
Oil anise.....	1 dram.
Oil wintergreen.....	1 dram.

940. Good Samaritan Liniment.

Take 98 per cent alcohol, 2 quarts; and add to it oils of sassafras, hemlock, spirits of turpentine, tincture of cayenne, catechu, gualiac (guac), and laudanum, of each 1 ounce; tincture of myrrh, 4 ounces; oil of origanum, 2 ounces; oil of wintergreen, $\frac{1}{2}$ ounce; gum camphor, 2 ounces; and chloroform, $\frac{1}{2}$ ounces.

941. Goodell's Four Chlorides.

Corrosive sublimate.....	1 grain.
Solution arsenic chloride. $\frac{1}{2}$ fl. dram.	
Tincture iron chloride,	
Acid hydrochloric dilute,	
each	4 fl. drams.
Syrup	3 fl. ounces.
Water, to make.....	6 fl. ounces.

942. Gourand's Oriental Cream.

New Idea.

Consists only of calomel (!) and water, in the proportion of about 39 grains of the former to each fluid ounce of the latter.

943. Gowland's Cosmetic Solution.

Hager.

Mercury bichloride,	
Ammonia muriate, of each.....	0.1
Dissolve in	
Emulsion bitter almonds.....	95.0
Alcohol	5.0

944. Gowland's Freckle Lotlon.

Kilner.

Sweet almonds (blanched)	1 ounce.
Bitter almonds (blanched)	$\frac{1}{2}$ ounce.
Corrosive sublimate.....	15 grains.
Alcohol	$2\frac{1}{2}$ drams.
Water to make.....	1 pint.

Make an emulsion of the almonds with the water and strain, add the mercurial salt dissolved in the spirit; lastly add water to make the whole measure one pint.

945. Gradltz Restorative Liquid.

Ph. Ztg.

Camphor, 5 parts; ether, 8 parts; tincture Spanish peppers, 24 parts; caustic ammonia, 50 parts; alcohol, 134 parts; chloride of sodium, 40 parts; water sufficient to dissolve the salt.

946. Graham's Cucumber and Elder Flower Cream.

Can. Dr.

Expressed oil almonds.....	5 parts.
Saturated solution of borax..	1 part.
Emulsify by shaking well together, then add to each pint 1 dram of the following mixture of perfuming oils:	
Oil bergamot.....	1 dram.
Oil lemon.....	2 drams.
Oil bitter almonds.....	10 drops.
Mix thoroughly.	

947. Green's August Flower.

Merck's Market Rept.

Rhubarb	6 drams.
Golden seal.....	$1\frac{1}{2}$ drams.
Aloes, Cape.....	16 grains.
Potassium carbonate....	2 drams.
Peppermint	2 drams.
Capsicum	5 grains.
Alcohol	3 ounces.
Sugar	$\frac{1}{2}$ pound.
Water	10 ounces.

Macerate the drugs in the alcohol and water, filter, and pour sufficient alcohol through the filter to make 1 pint; then dissolve the sugar.

948. Greene's Nervura Nerve Tonic.

Bull. of Pharm.

Coca tincture,
Damlana tincture,
Calisaya tincture, of each equal parts.

949. Grimault's Injection of Matico.

New Idea.

Distill about $\frac{1}{2}$ to 1 fluid dram of fluid extract of eucalyptus globulus with water sufficient to obtain 5 fluid ounces of distillate and then in this dissolve 4 grains of copper.

950. Grimault's Elixir Pepsin.

Hager.

Pepsin	2.0
Citric acid.....	1.0
Dissolve in	
Brandy	60.0
Syrup	25.0
Spirit de garus.....	25.0
Hydrochloric acid.....	1.0

951. Guindre's Aperient Salts.

Hager.

Dried sulphate sodium.....	25.0
Potassium nitrate.....	0.5
Tartar emetic.....	0.025

952. Hagan's Magnolia Balm.

Dr. Circ.

Pure oxide of zinc.....	1 ounce.
Rose water.....	4 ounces.
Glycerine	1 dram.
Perfume	25 drops.

953. Hagan's Magnolia Balm.

New Idea.

Zinc oxide	4 drams.
Glycerine	$1\frac{1}{2}$ fl. ounces.
Water	2 fl. ounces.
Carmin	$\frac{1}{4}$ grain.
Oil bergamot	1 minim.
Oil lemon	1 minim.

954. Haines' Golden Specific.

Dr. Circ.

Bayberry root	16 parts.
Ginger	8 parts.
Capsicum	1 part.

955. Hair's Asthma Remedy.

New Idea.

Potasslum iodide	1 ounce.
Tar water	16 fl. ounces.
Caramel, sufficient quantity to color light brown, or about 30 grains.	

956. Hall's Catarrh Cure.

Dr. Circ.

Potassium iodide	1 dram.
Compound tincture of	
cardamom	4 fl. ounces.
Compound tincture of	
gentian	12 fl. ounces.
Caramel, sufficient to color.	

957. Hall's Hair Renewer.

New Idea.

Sulphur, precipitated, ..	1 dram.
Lead acetate	1 dram.
Salt	2 drams.
Glycerine	8 fl. ounces.
Bay rum	2 fl. ounces.
Jamaica rum	4 fl. ounces.
Water	16 fl. ounces.

958. Hall's Hair Renewer.

Dr. Circ.

Tea	2 drams.
Raspberry leaves	3 drams.
Sage	4 drams.
Oil of citronella.....	$2\frac{1}{2}$ drops.
Best lac sulphur.....	18 drams.
White sugar of lead.....	2 ozs. 10 grs.
Glycerine	42 ounces.
Water, a sufficient quantity.	

Steep the sage and raspberry leaves together in 18 fluid ounces of water, and the tea separately in 10 fluid ounces; filter and mix the liquids, adding sufficient water through the filter to make the mixture measure 27 fluid ounces. Add to the other ingredients 43 fluid ounces of water, and mix the whole thoroughly together.

959. Ham's Oil of Gladness.

Am. Dr.

Oil of cedar	2 drams.
Oil hemlock	2 drams.
Oil sassafras	2 drams.
Oil thyme	1 dram.
Camphor, powdered,	1 ounce.
Linseed oil	2 pints.

Dissolve the oils and the camphor in a sufficient quantity of alcohol, and add the solution to the linseed oil. Dose, 8 to 10 drops for a child.

960. Hamburg Tea.

Am. Dr.

Marshmallow flowers, cut..	8 ounces.
Licorice root, cut.....	3 ounces.
Orris root, cut.....	1 ounce.
Coltsfoot, cut.....	4 ounces.
Mullein flowers, cut.....	2 ounces.
Anise seed, cut.....	2 ounces.
Mix thoroughly.	

961. Hamburg Purgative Tea.

Hager.

Coarsely powder 4 parts crystallized tartaric acid, mix with 60 parts manna, and add to a mixture of 45 parts of coriander seed and 100 parts senna leaves which have previously been coarsely powdered.

962. Hamburg Bitters.

Sci. Am. Cyc. Rec.

Grind to a coarse powder 2 ounces agaric, 5 ounces cinnamon, 4 ounces cassia buds, $\frac{1}{2}$ ounce grains of paradise, 3 ounces quassia wood, $\frac{3}{4}$ ounce cardamom seeds, 3 ounces gentian root, 3 ounces orange apples dried, $1\frac{1}{2}$ ounces orange peel. Macerate with $4\frac{1}{4}$ gallons of 95 per cent alcohol, mixed with $5\frac{3}{4}$ gallons water, and $2\frac{3}{4}$ ounces acetic ether. Color, brown.

963. Hamburg Bitters.

Am. Dr.

Galanga root	80	troy ounces.
Ginger	24	troy ounces.
Laurel berries	24	troy ounces.
Nutmeg	18	troy ounces.
Cassia buds	14	troy ounces.
Black pepper	8	troy ounces.
Orris root, powdered	7	troy ounces.
Cloves	5	troy ounces.
Lovage root	7	troy ounces.
Capsicum	$\frac{3}{4}$	troy ounce.
Alcohol	$29\frac{1}{2}$	pints.
Water	$10\frac{1}{2}$	pints.

Macerate the solids, properly comminuted with the previously mixed liquid during 1 week, then express and filter.

964. Hamilton's Tonic.

Kilner.

Strychnia sulphate	4	grains.
Cinchonidia sulphate	256	grains.
Tincture muriate iron....	3	ounces.
Phosphoric acid, dilute...	1	ounce.
Syrup ginger	28	ounces.

965. Hamlin's Cholera Mixture.

Dr. Circ.

Tincture opium	1	ounce.
Tincture capsicum	1	ounce.
Tincture ginger	1	ounce.
Tincture cardamom	1	ounce.

966. Hamlin's Cholera Mixture.

A. P. A.

Tincture of opium	1	part.
Tincture of camphor	1	part.
Tincture of rhubarb	2	parts.

967. Hamlin's Wizard Oil.

New Idea.

Oil sassafras	1	fl. dram.
Oil peppermint	2	fl. ounces.
Oil cloves	2	fl. ounces.
Ammonia water	$\frac{1}{2}$	fl. dram.
Spirit nitrous ether	2	fl. ounces.
Gum camphor	1	troy ounce.
Alcohol	1	pint.

Dissolve the oils and camphor in the alcohol, then add the spirit nitre, and lastly the ammonia. Let the preparation stand 3 or 4 days, then filter.

968. Hamlin's Wizard Oil.

New Idea.

Oil cloves	2	drams.
Ammonia water	2	drams.
Ether	2	drams.
Oil turpentine	4	drams.
Chloroform	1	dram.
Camphor	2	drams.
Oil sassafras	1	ounce.
Alcohol enough to make...	1	pint.

969. Hamlin's Wizard Oil.

New Idea.

Tincture of camphor	8	parts.
Aqueous ammonia	4	parts.
Oil of sassafras	4	parts.
Oil of cloves	1	part.
Chloroform	2	parts.
Oil of turpentine	1	part.
Alcohol	25	parts.

970. Hamlin's Wizard Oil.

New Idea.

Spirits of camphor	20	parts.
Liquor ammonia.....	10	parts.
Oil of sassafras	10	parts.
Oil of cloves	6	parts.
Chloroform	15	parts.
Turpentine	10	parts.
Alcohol	50	parts.

971. Hamlin's Wizard Oil.

New Idea.

Alcohol	1	pint.
Gum camphor	1	ounce.
Oil sassafras	$\frac{1}{2}$	ounce.
Tincture myrrh	$\frac{1}{2}$	ounce.
Tincture capsicum	$\frac{1}{2}$	ounce.
Chloroform	$\frac{1}{2}$	ounce.

972. Hanson's Magic Corn Salve.

An ointment base, consisting wholly or chiefly of lard, with salicylic acid as preservative agent.

973. Darland's Venereal Cure.

Mix together powdered cubebs, $1\frac{1}{2}$ ounces; balsam copaiba, $\frac{1}{2}$ ounce; powdered gum arabic, $\frac{1}{2}$ ounce; cinnamon water, 3 ounces.

974. Harlem Oil.

Parrish.

Sulphurated oil..... 3 pints.
Barbadoes tar..... 1 pint.
Oil amber, crude..... $1\frac{1}{2}$ pints.
Oil turpentine..... 8 pints.
Oil linseed..... 4 pints.

975. Harrison's Hair Dye.

No. 1. To 1 ounce pyro-gallic acid, 1 ounce of tannin dissolved in 2 ounces alcohol, add 1 quart soft water.

No. 2. To 1 ounce crystallized nitrate of silver, dissolved in 1 ounce of concentrated aqua-ammonia, add 5 ounces soft water and 1 ounce of gum arabic.

No. 3. One ounce hydro-sulphate of potassa, dissolved in 1 quart of soft water. This last ingredient is intended to produce a deep black color if the others should fail. Keep away from the light.

976. Harter's Wild Cherry Bitters.

Pharm. Rec.

Wild cherry..... 250 grams.
Cinchona bark..... 30 grams.
Orange peel..... 50 grams.
Cardamon seeds..... 25 grams.
Hazel root..... 15 grams.

Are digested with 3 liters alcohol for some time, expressed, $\frac{1}{2}$ liter honey and $\frac{1}{2}$ liter simple syrup added, and enough water to make 3 liters.

977. Harter's Wild Cherry Bitters.

Dr. Circ.

Wild cherry bark..... 8 ounces.
Yellow cinchona bark..... 1 ounce.
Orange peel..... 2 ounces.
Cardamom seed..... 1 ounce.
Canada snake root..... $\frac{1}{2}$ ounce.
Diluted alcohol..... 6 pints.
Honey 1 pint.
Syrup 1 pint.

Percolate the drugs in moderately fine powder with the diluted alcohol, and when 6 pints are obtained, add the honey and syrup.

978. Hawthorn's Cholera Mixture.

Spirits of camphor..... 1 ounce.
Spirits of chloroform..... 1 ounce.
Tincture of opium..... 1 ounce.
Aromatic spirits of ammonia 1 ounce.
Cinnamon water..... 1 pint.

979. Hayden's Viburnum Compound.

Dr. Hazard, in Times and Register.

Ground cramp bark..... 1 ounce
Scullycap $\frac{1}{2}$ ounce.
Wild yam..... 1 ounce.
Ground cloves..... 1 ounce.
Ground cinnamon..... 1 ounce.

Mix and macerate in 12 ounces of 76 per cent alcohol from one to three days, then filter and add enough tincture of cinnamon to make 16 ounces.

980. Helmbold's Buchu.

Pract. Hints and Form.

Short buchu..... 9 ounces.
Uva ursi..... $4\frac{1}{2}$ ounces.
Licorice root..... 10 drams.

Macerate in 9 pints of boiling water, strain and add:

Caramel 2 ounces.
Molasses 8 ounces.

Mix well and add:

Fluid extract cubebs..... 5 ounces.
Alcohol 2 pints.
Oil peppermint..... 1 ounce.
Water, sufficient to make 12 pints.

981. Henderson's Liniment.

Camphor, powdered..... 1 ounce.
Castile soap, powdered... 2 ounces.
Ammonium carbonate... $1\frac{1}{2}$ ounces.
Oil turpentine..... 3 ounces.
Oil origanum..... 2 ounces.

Mix and allow to stand from 2 to 4 hours in a warm place and gradually add enough water to make the whole measure $\frac{1}{2}$ gallon.

982. Hensel's Tonic.

West. Dr.

Formic acid (s. g. 1,200)... 55 grams.
Water 300 grams.
Marble dust..... 30 grams.

Dissolve

Ferrous sulphate, cryst... 21 grams.
Solution ferric sulphate,
(s. g. 1,318)..... 100 grams.
Acetic acid, glacial..... 300 grams.
Water 300 grams.

Mix.

Combine the two solutions and add

Alcohol (s. g. 0.830)..... 400 grams.

After the separation of the calcium sulphate formed, filter, and lastly add

Acetic ether..... 10 grams.

983. Himrod's Asthma Cure.

Lobelia, ground..... 2 ounces.
Stramonium leaves..... 2 ounces.
Nitrate potash..... 2 ounces.
Black tea..... 2 ounces.

984. Hinds' Honey and Almond Cream.

Dr. Circ.

Ointment of rose water, U.
 S. P. 5 parts.
 Oil of sweet almonds..... 5 parts.
 Glycerine 5 parts.
 Boric acid..... 5 parts.
 Solution of soda, U. S. P. 12 parts.
 Mucilage of quince seed
 (2 drams to 1 part)..... 25 parts.
 Water, sufficient to make.. 200 parts.
 Oil of bitter almond,
 Oil of rose, of each sufficient to per-
 fume.

Heat the ointment, oil and solution of soda together, stirring constantly until an emulsion is formed; then warm together the glycerine, acid, mucilage and about 150 parts of water, mix with the emulsion, stir until cold, and make up to 200 parts by adding more water. Lastly add the perfume.

985. Hoffman's Red Drops.

Tincture capsicum..... 4 parts.
 Spirits cassia..... 4 parts.
 Essence peppermint..... 2 parts.
 Spirits camphor..... 2 parts.
 Tincture cochineal..... 2 parts.
 Tincture opium..... 1 part.
 Alcohol 16 parts.

986. Hoffman's Red Drops.

Kilner.

Oil of amber, rectified.... 2 drams.
 Oil of cloves..... 2 drams.
 Oil of cassia..... 2 drams.
 Oil of lavender..... 2 drams.
 Oil of mace..... 2 drams.
 Balsam Peru..... 4 drams.
 Alcohol 40½ ounces.

Mix; let stand one day, then color with tincture alkanet, and filter.

987. Holloway's Pills.

New Idea.

Aloes 36 parts.
 Jalap 18 parts.
 Ginger 18 parts.
 Myrrh 18 parts.
 To make N. pills.

988. Holman's Liver Pad.

Dr. Circ.

May apple root..... ½ ounce.
 Leptandra root..... ½ ounce.
 Bayberry root..... 2 drams.
 Red cinchona bark..... 2 ounces.
 Fenugreek ½ ounce.
 Gualac resin..... 1½ ounces.
 Oil of eucalyptus..... 2 fl. drams.

Grind the solids to powder, mix with them the oil, and make into a pad, using cotton cloth of suitable thickness as the envelope.

989. Holmes' Liver Pills.

New Idea.

Colocynth pulp 1 ounce.
 Gamboge 1 ounce.
 Scammony 1 ounce.
 Barbadoes aloes 2 ounces.
 Castile soap ½ ounce.
 Oil mentha piperita..... 2 fl. drams.
 Water, q. s.

Make into 3-grain pills.

990. Hop Bitters, English.

Kilner.

Calamus root 1 ounce.
 Orange peel 2 ounces.
 Saxifrage root 1 ounce.
 Hops ½ ounce.
 Alcohol 16 ounces.
 Water 94 ounces.
 Sugar 4 ounces.

Macerate the drugs in alcohol and water for 7 days, then percolate, adding sufficient water to make 1 quart; lastly, add the sugar and shake well until dissolved.

991. Hop Bitters.

Ch. & Dr.

Glycerine 4 ounces.
 Alcohol 3 ounces.
 Tincture mandrake ammo-
 niated 6 drams.
 Tincture gentian compound 6 ounces.
 Extract dandelion 4 ounces.
 Infusion lupulin conc. 6 ounces.
 Tincture calumba 4 ounces.
 Infusion senega concent.... 2 ounces.
 Water enough to make...½ gallon.

Mix in the above order, set aside for 12 hours, and filter through carbonate of magnesia.

992. Horner's Rheumatic Lightning.

New Idea.

Fluid extract colchicum
 seed 64 minims.
 Fluid extract cimicifuga.. 256 minims.
 Acetate of potash..... 128 grains.
 Salicylate of soda..... 256 grains.
 Alcohol (15 per cent) q. s.
 ad 1 pint.

993. Hostetter's Bitters.

Dr. Circ.

Calamus root	2 pounds.
Orange peel	2 pounds.
Peruvian bark	2 pounds.
Gentian root	2 pounds.
Columbo root	2 pounds.
Sugar	2 pounds.
Rhubarb	8 ounces.
Cinnamon	4 ounces.
Cloves	2 ounces.
Alcohol	2 gallons.
Water	4 gallons.

994. Hostetter's Bitters.

Dr. Circ.

Gentian	15 grains.
Blessed thistle	15 grains.
Calamus	15 grains.
Orange peel	60 grains.
Oil of orange	1 drop.
Sugar	320 grains.
Alcohol,	
Water, of each sufficient	
to make	1 pint.

Mix the alcohol and water in the proportion of 6 parts of alcohol with 4 parts of water, and having ground the first 4 ingredients, macerate them for 48 hours with a sufficient quantity of the menstruum to yield, when expressed, 16 fluid ounces. In the tincture dissolve the sugar by agitation, and add the oil of orange. Finally, decant or filter.

995. Howlett's Ague Pills.

Kilner.

Quinine	2 drams.
Powdered gum myrrh	1 dram.
Powdered capsicum	1 dram.
Make into 64 pills.	

996. Hoyt's German Cologne.

Am. Drug.

Alcohol	5 gallons.
Oil bergamot	4 ounces.
Oil lemon	4 ounces.
Oil neroli	1 ounce.
Oil sandal wood	2 ounces.
Camphor	¼ ounce.
Let stand 14 days and filter.	

997. Hoyt's Cologne.

New Idea.

Oil neroli	30 minims.
Oil patchouly	40 minims.
Oil santal	40 minims.
Oil rose geranium	60 minims.
Oil Canada snake root....	180 minims.
Oil lavender	60 minims.
Extract tuberosc	1 ounce.
Extract musk	2 ounces.

Tincture storax	2 drams.
Alcohol	40 ounces.
Water	8 ounces.
Mix, and after standing, filter.	

998. Hudson's Honey of Elm.

Precipitated chalk, powdered pumice stone, glycerine, oil of cloves, oil of wintergreen, and simple syrup. (Quantities not given.)

999. Hunter's Red Drops.

A. P. A.

Compound spirit of lavender	1 ounce.
Corrosive sublimate	10 grains.
Hydrochloric acid	10 grains.

1000. Hunyadi Janos Water, Artificial.

New Idea.

Magnesium sulphate	½ ounce.
Sodium sulphate	½ ounce.
Potassium sulphate	2 grains.
Sodium bicarbonate	8 grains.
Sodium chloride	20 grains.
Water, to make.....	8 ounces.

1001. Hunyadi Janos Water, Artificial.

Sulphate of potassium....	0.5 parts.
Chloride of sodium.....	14. parts.
Bicarbonate of sodium....	52.9 parts.
Sulphate of sodium (dried)	180. parts.
Sulphate of lime (precipitated)	15. parts.
Sulphate of magnesium..	24.5 parts.
Sulphate of iron (dried)..	2. parts.
Dissolve in 10 litres of water.	

To prepare an ordinary dose, put a tablespoonful of the solution in a half-pint bottle, fill the bottle half full of water, shake, and fill up with carbonated water.

1002. Ingall's Pills.

Kilner.

Pulverized gamboge.....	50 grains.
Aqueous extract aloes soct.	50 grains.
Podophyllin	50 grains.
Mix and make 100 pills.	

1003. Ingluvin Elixir.

Kilner.

Ingluvin	1 ounce.
Alcohol	2 ounces.
Water	4 ounces.
Simple elixir, quantity sufficient to make.....	12 ounces.

Macerate the ingluvin in the alcohol for 24 hours. Agitate. Put in water bath and allow it to simmer one hour at a temperature of 100 degrees. Next add the water, and again allow to simmer for half an hour, at an increased temperature of 150 degrees. Lastly, filter and add the simple elixir.

1004.**Iodia.**

Kilner.

Fluid extract of stillingia.	3 ounces.
Fluid extract of prickly ash	1 ounce.
Fluid extract of saxifrage	½ ounce.
Fluid extract of yellow parilla	½ ounce.
Fluid extract of blue flag.	½ ounce.
Iodide of potassium.....	256 grains.
Pyrophosphate of iron....	256 grains.
Diluted phosphoric acid..	½ ounce.
Hot water.....	2 ounces.

Dissolve the iodide of potassium in mixture of the fluid extracts, and the pyrophosphate of iron in the water, mix the two solutions gradually, add the phosphoric acid, and after 24 hours filter.

1005. Jackson's Bathing Spirit.

Cooley.

Soft soap, 1 pound; camphor, 6 ounces; oils of rosemary and thyme, of each ¾ fluid ounce; rectified spirit, 1 gallon.

1006. Jayne's Expectorant.

West. Dr.

Tartar emetic.....	8 grains.
Fluid extract ipecac.....	8 minims.
Tincture opium.....	4 fl. drams.
Tincture lobelia.....	2 fl. drams.
Tincture digitalis.....	2 fl. drams.
Syrup tolu.....	3 fl. ounces.
Syrup squill enough to make	8 fl. ounces.

1007. Jayne's Expectorant, Imitation.

Merck's Mar. Rept.

Tartar emetic.....	4 grains.
Aromatic spirit.....	1 fl. dram.
Fluid extract ipecac.....	4 minims.
Tincture opium.....	2 fl. drams.
Tincture lobelia.....	1 fl. dram.
Syrup tolu.....	12 fl. drams.
Tincture digitalis.....	1 fl. dram.
Syrup squill.....	2 fl. ounces.

1008. Jayne's Expectorant.

Am. Dr.

Tincture of tolu.....	1½ fl. ounces.
Tincture of camphor.....	1 fl. dram.
Tincture of lobelia.....	1 fl. dram.
Tincture of digitalis.....	1 fl. dram.
Tincture of opium.....	2 fl. drams.
Syrup of squill.....	2 fl. ounces.
Ipecac, powder.....	4 grains.
Tartrate of antimony and potash.....	4 grains.

Dissolve the tartrate of antimony and potassium in the tincture of lobelia or digitalis, and mix with the other ingredients.

1009.**Jesuit Drops.**

Hager.

Tincture gualac.....	100.0
Balsam Peru.....	1.0
Oil fennel.....	10.0

1010.**Jesuit Drops.**

Balsam of copalba.....	180 grains.
Resin of gualac.....	30 grains.
Chlan turpentine.....	15 grains.
Carbonate of potassium.	15 grains.
Cochineal	3 grains.
Alcohol	2½ fl. ounces.

These ingredients are to be digested for a week and then filtered.

1011. Jewsbury & Brown's Oriental Tooth Paste.

Nelson's Hand Book.

Carminc	1 dram.
Water	2 drams.
Honey	6 ounces.
Oil peppermint.....	5 drops.
Oil anise.....	5 drops.
Oil orange.....	10 drops.
Oil wintergreen.....	10 drops.
Precipitate carbonate of calcium,	sufficient.

Rub thoroughly together, using enough calcium carbonate to form a stiff paste. To insure good color, the carmine should be thoroughly triturated with a portion of the carbonate before the liquid ingredients are added.

1012.**Kalydor.**

Nat. Dr.

Bitter almonds, blanched..	1,000 parts.
Rose water.....	5,000 parts.
Corrosive sublimate.....	1 part.
Ammonium chloride.....	75 parts.
Cherry laurel water.....	150 parts.
Alcohol	150 parts.

Rub up the almonds and rose water to a homogeneous consistency, and filter. To the filtrate add the ammonium chloride and cherry laurel water. Finally dissolve the corrosive sublimate in the alcohol and mix the solutions.

1013. Kannewurf Digestive Powder.

Hager.

Orange peel.....	2.5
Rhubarb	5.
Cream tartar.....	20.0
Sugar	40.0

1014. Keating's Cough Lozenges.

Dr. Circ.

Lactucarium 2 drams.
 Ipecac 1 dram.
 Squills $\frac{3}{4}$ dram.
 Extract of licorice..... 2 drams.
 Sugar 6 ounces.

Make into a mass, with tragacanth mucilage, and divide into 20-grain lozenges.

1015. Kellogg's Red Drops.

Spirit camphor..... 2 ounces.
 Spirit origanum..... $\frac{1}{4}$ ounce.
 Oil sassafras $\frac{1}{4}$ ounce.
 Oil turpentine..... $\frac{1}{2}$ ounce.
 Colored tincture, about.... 4 ounces.

1016. Kelly's Tonic.

Kilner.

Tincture nux vomica.... 2 drams.
 Dilute nitromuriatic acid. 3 drams.
 Tincture cinchona compound $1\frac{1}{2}$ ounces.
 Tincture gentian compound, to make..... 3 ounces.

1017. Kempf's Seidlitz Powder.

The Pharmacist, 1881.

No. 1.

Rochelle salt..... 2 drams.
 Sodium bicarbonate..... 40 grains.

Dissolve in one-half tumblerful of water and add

No. 2.

Tartaric acid..... 35 grains.
 Ammonium chloride..... 5 grains.

Also dissolved in some water.

1018. Kendall's Spavin Cure.

Camphor, 4 ounces; corrosive sublimate, 30 grains; turpentine, 4 fluid ounces; tincture of iodine, 4 fluid ounces; crude oil of spike, 2 fluid ounces; oil amber, 2 fluid drams.

1019. Kendall's Spavin Cure.

New Idea.

Camphor, 21 parts; turpentine, 30; oil rosemary, 1; iodine, 5; alcohol, 192; water, 39. Dissolve the solid ingredients in a portion of the alcohol, and add the remaining ingredients.

1020. Kennedy's Medical Discovery.

New Idea.

Sneezewort (helenium autumnale) 1 ounce.
 Bitter root..... 4 drams.

Mix and add

Boiling water..... 8 fl. ounces.
 Proof spirits..... 10 fl. ounces.
 Licorice root..... 4 drams.

Macerate 48 hours; then add

White sugar..... 4 ounces.
 Tincture gaultheria..... 1 ounce.

1021. Kennedy's Pinus Canadensis White.

Dr. Hazard, in Times & Register.

Zinc sulphate 1 dram.
 Glucose 1 ounce.
 Water, enough to make....16 ounces.
 Flavor by adding oil pinus sylvestris.

1022. Kenny's Hog Cholera Cure.

Kilner.

Powdered mandrake 4 pounds.
 Powdered charcoal 2 pounds.
 Powdered resin 1 pound.
 Powdered saltpeter 1 pound.
 Powdered madder 1 pound.
 Powdered bicarbonate soda 11 pounds.
 Mix thoroughly.

1023. Kenkle's Vegetable Worm Syrup.

New Idea.

Santonine 27 grains.
 Oil sassafras 1 minim.
 Alcohol 2 fl. ounces.
 Fluid extract pink root.. 2 fl. ounces.
 Fluid extract dandelion.. $\frac{1}{2}$ fl. ounce.
 Fluid extract golden seal $\frac{1}{4}$ fl. ounce.
 Molasses $\frac{1}{2}$ fl. ounce.

The santonine in a finely triturated condition.

1024. Ketchell's Liniment.

West. Dr.

Water 3 parts.
 Aqua ammonia 1 part.
 Colored with burnt sugar.

1025. Kickapoo Indian Oil.

New Idea.

Camphor $\frac{1}{2}$ troy ounce.
 Oil turpentine 1 fl. dram.
 Oil peppermint $\frac{1}{2}$ fl. dram.
 Oil wintergreen $\frac{1}{2}$ fl. dram.
 Tincture capsicum $\frac{1}{2}$ fl. ounce.
 Alcohol, q. s. to make.... 1 pint.

1026. King's Consumption Cure.

Kilner.

Syrup tolu 4 ounces.
 Syrup wild cherry 16 ounces.
 Tincture hyoscyamus 2 ounces.
 Syrup squills..... 4 ounces.
 Chloric ether 1 ounce.
 Water, q. s. to make 32 ounces.

1027. King's Expectorant.

Am. Dr.

Lobelia, herb, 1 troy ounce.
 Sanguinaria root 1 troy ounce.
 Skunk cabbage root.... 1 troy ounce.
 Wild ginger root (asarum canadense)..... 1 troy ounce.
 Picurisy herb (asclepias tuberosa) 1 troy ounce.
 Water or vinegar 16 ounces.
 Alcohol 48 ounces.

Reduce the drugs to a moderately fine

powder, and form a tincture by maceration or percolation, using more of the menstruum, in the above-given proportions, so as to obtain 4 pints of tincture.

1028. King's New Discovery.

Am. Dr.

Sulphate morphia, 8 grains; fluid extract ipecac, $\frac{1}{2}$ dram; chloroform, 60 drops; tincture white pine, 2 ounces; water, 7 ounces; carbonate magnesia, $\frac{1}{4}$ ounce; sugar, 14 ounces.

Rub the magnesia with 1 ounce of the sugar in a mortar, and triturate with the tincture of white pine and the fluid extract of ipecac; gradually add the water and triturate with the mixture in the mortar. Filter, and dissolve the sulphate of morphia in the filtrate; mix the chloroform with the rest of the sugar in the bottle, and add the liquid above.

1029. Kirkland's Neutral Cerate.

Ph. Rec.

Lead plaster 4 ounces.
Olive oil 2 ounces.
Chalk 2 ounces.
Solution subacetate lead, 2 fl. drams.
Dilute acetic acid 2 fl. drams.

Melt the lead plaster, add the oil, then the chalk, remove the heat, add the lead solution and then dilute acetic acid, stir till cold.

1030. Dr. Kline's Great Nerve Restorer.

New Idea.

Ammonium bromide 3 drams.
Potassium bromide 3 ounces.
Potassium carbonate 70 grains.
Tincture calumba 6 fl. drams.
Water 6 fl. ounces.

1031. Liquid Lactopeptine.

D. C.

Lactopeptine 300 grains.
Distilled water 5 fl. ounces.
Filter, and add:
Glycerine 3 fl. ounces.

1032. Laird's Bloom of Youth.

Boil 1 ounce of Brazil wood in 3 pints of water for 15 minutes; strain. Add $\frac{3}{4}$ ounce isinglass, $\frac{1}{4}$ ounce cochineal, 1 ounce alum, $\frac{1}{2}$ ounce borax. Dissolve by heat and strain.

1033. Langdon's Diarrhoea Mixture.

Kilner.

Tincture of camphor 3 drams.
Tincture of capsicum 1 dram.
Spirits of lavender, compound 2 drams.
Tincture of opium 2 drams.

1034. Laville's Gout and Rheumatism Mixture.

Hager.

Calcium chloride 5.0 grams.
Chnoldin 5.0 grams.
Extract colocynth 2.5 grams.
Water 85.0 grams.
Alcohol 100.0 grams.
Spanish wine 800.0 grams.

Make into a solution. A pill of very complicated composition is used in connection with the gout remedy.

1035. Lemor's Hydragogue Pills.

Hager.

Aloes 2.5
Gamboge 2.5
Ammoniac 2.5
Potassium sulphate 2.5
Althea root 2.5
Vinegar, q. s.

Divide into 50 pills.

1036. Liebig's Nutriment Extract.

Hager.

Extract malt 100.0
Potassium bicarbonate 2.5
Common salt 1.5
Sugar of milk,
White sugar, of each 10.0
Pure dextrin 20.0

1037. Listerine.

Dr. Hazard in Times and Register.

Dissolve 1 dram benzoic acid and $\frac{1}{2}$ dram each of menthol and thymol, 2 drams boracic acid in 4 ounces alcohol. Then add to it 1 dram borax dissolved in 12 ounces of water. The odor of the original can be imitated by the addition of 5 to 10 drops each of oil of gualtheria and encalyptus.

1038. Listerine.

West. Dr.

Boric acid 2 drams.
Benzoic acid 2 drams.
Dissolve in water 64 ounces.
Fluid extract wild indigo. 4 drams.
Menthol 2 drams.
Oil eucalyptus 3 drams.
Oil wintergreen $\frac{1}{2}$ dram.
Dissolve in alcohol 64 ounces.

Mix the two solutions and filter through magnesium carbonate.

1039. Listerine.

Spiritus Thymolini Compositus.

The following formula was read before the Denver Pharmaceutical Association and

claimed to make a very satisfactory preparation:

Benzoic acid,
Sodium baborate, of each 1 oz., 32 grs.
Boric acid..... 2 ozs., 64 grs.
Dissolve, with the aid
of heat, in distilled
water 48 ounces.

Then add:

Thymol 160 grains.
Eucalyptol,
Oil wintergreen, of each 40 drops.
Oil peppermint 24 drops.
Oil white thyme..... 8 drops.
Previously dissolved in
alcohol (94 per cent).... 24 ounces.

Mix the two solutions.

Add:

Caramel 10 drops.
Distilled water, enough
to make 1 gallon.

Let the mixture stand 24 hours, and finally pass through a wetted double filter.

1040. Listerine.

Oil eucalyptus..... 10 grains.
Oil wintergreen..... 10 grains.
Menthol 10 grains.
Thymol 10 grains.
Boric acid ½ ounce.
Alcohol 4½ fl. ounces.
Water, sufficient to
make 16 fl. ounces.

1041. Listerine.

Benzoic acid..... 64 grains.
Boracic acid..... 128 grains.
Thymol 30 grains.
Menthol 30 grains.
Borax 30 grains.
Oil eucalyptus..... 4 drops.
Oil wintergreen..... 4 drops.
Oil horsemint..... 5 ounces.
Alcohol 4 ounces.
Water, enough to make.. 1 pint.

1042. Mixtura Lithonatriptica.

Hager.

Benzoic acid..... 2 parts.
Sodium bicarbonate..... 5 parts.
Sodium phosphate..... 10 parts.
Dissolve in
Cinnamon water..... 200 parts.
Tincture hyoscyamus..... 10 parts.

1043. Logan's Plaster.

Parrish.

Litharge,
Carbonate of lead,
each 1 pound com.
Castile soap..... 12 ounces com.
Fresh butter..... 4 ounces.
Olive oil..... 2½ pints.
Powdered gum mas-
tich 2 drams.

Mix the soap, oil and butter together; then add the oxide of lead, and boil it gently over a slow fire for an hour and a half, or until it has a pale brown color, stirring constantly; the heat may then be increased, and the boiling continued, till a portion of the melted plaster, being dropped on a smooth board, is found not to adhere; then remove it from the fire, and add the powdered gum mastich.

1044. Loomis' Tonic.

Ph. Rec.

Sulphate quinine..... 15 grains.
Tincture chloride iron... 120 minims.
Spirit chloroform..... 180 minims.
Water 1 fl. ounce.
Glycerine, to make..... 2 fl. ounces.

1045. Low's Magnetic Liniment.

New Idea.

Oil turpentine..... 90 parts.
Tincture capsicum..... 10 parts.
Spirit camphor..... 960 parts.
Stronger water ammonia.. 90 parts.
Alcohol (sp. g. 0.820)..... 180 parts.
Oil sassafras..... 6 parts.
Fluid extract sassafras..... 40 parts.

1046. Lubin's Eau de Toilette.

Nat. Drug.

Orris root..... 30 grams.
Tincture of tolu..... 10 grams.
Essence musk..... 12 grams.
Extract of mousseline..... 10 grams.
Tincture of oil of lavender. 16 grams.
Tincture of bergamot oil... 30 grams.
Tincture of clove oil..... 1 gram.
Tincture of attar of ylang-
ylang 5 grams.
Alcohol 75 grams.

Mix and let macerate for several days, then filter.

1047. Lyons' Kathairon.

Drogisten Zeitung.

Castor oil..... 2 liters.
Tincture of cantharides... 240 grams.
Tannin 31 grams.
Bergamot oil..... 29 grams.
Clove oil..... 29 grams.
Lavender oil..... 7 grams.
Rosemary oil..... 7 grams.
Alcohol 6 liters.

Mix and dissolve.

1048. Lyons' Kathairon.

New Idea.

Castor oil..... 1 fl. ounce.
Tincture cantharides.... 1 fl. dram.
Oil of bergamot..... 20 minims.
Stronger water of ammo-
nia..... 1 drop.
Alcohol, q. s..... 3 fl. ounces.

1049. Lyons' Hair Restorer.

Am. Pharm.

Tincture capsicum.....	1 dram.
Castor oil.....	½ ounce.
Bay rum.....	2 ounces.
Alcohol	2 ounces.

1050. Lyons' Tooth Powder.

Precipitated chalk.....	11½ ounces av.
Powdered castile soap.	4 ounces av.
Flowers of pumice stone.....	½ ounce av.
Oil of wintergreen.....	1 fl. dram.

1051. Magnetic Balsam.

Dr. Circ.

Oil of cloves.....	½ fl. ounce.
Oil origanum.....	½ fl. ounce.
Oil spearmint.....	½ fl. ounce.
Sulphuric ether.....	½ fl. ounce.
Gum camphor.....	½ ounce.
Powdered cayenne... ..	½ ounce.
Alcohol	24 ounces.

Mix, and let the mixture stand two days, or longer, shaking occasionally, and filter.

1052. Malvina Cream.

New Idea.

Petrolatum	265 grains.
White wax	50 grains.
Spermaceti	30 grains.
Bismuth oxychloride	40 grains.
Mercuric chloride	½ grain.
Spirit of rose (4 drams of oil to 1 pint).....	20 minims.
Oil of bitter almonds	1-16 minim.

Warm the saxoline, white wax and spermaceti together until melted. While cooling, incorporate the bismuth oxychloride and the mercuric chloride, this last previously dissolved in a little alcohol, and when nearly cold, stir in the perfumes.

1053. Malvina Lotion.

New Idea.

Make an emulsion of almonds (2 drams to 1 pint) with rose water. In 1 pint of this fluid dissolve 2 grains of mercuric chloride and suspend in the mixture 3 drams of zinc oxide.

1054. Marchant's Aperient Pills.

Hager.

Podophyllin	1.5
Extract hyoscyamus	1.0
Soap, q. s.	

Make into 50 pills and dust with lycopodium.

1055. Mariazell Stomach Drops.

Calamus	10 parts.
Gentian	10 parts.
Rhubarb	10 parts.
Zedoary	10 parts.
Anise	10 parts.
Fennel	10 parts.
Aloes	5 parts.
Benzoin	7½ parts.
Balsam tolu	10 parts.
Alcohol	600 parts.

Make a tincture.

1056. Marienbad Purging Salts.

Beasley.

Bicarbonate of soda.....	5 ounces.
Dried sulphate of soda..	12 ounces.
Dried chloride of sodium	1½ ounces.
Sulphate of magnesia....	2 ounces.
Dried bisulphate of soda	2½ ounces.

Mix the salts, previously dried separately, and keep them carefully from the air.

1057. Marienbad Reduction Pills.

Merck's Mar. Rep.

Bromide of potassium.....	10 parts.
Bicarbonate of sodium.....	20 parts.
Extract of squill.....	20 parts.
Gualac wood.....	40 parts.
Senega root.....	40 parts.

Mix with extract of taraxacum and make into a mass. The pills are 2-grain, and should be silvered or dusted with cinnamon.

1058. Mathieu's Vermifuge.

Tin filings	1 ounce.
Fern root	¾ ounce.
Wormseed	½ ounce.
Extract of jalap	1 dram.
Sulphate of potassium....	1 dram.
Honey to form an electuary.	

A teaspoonful every 3 hours for 2 days, then substitute the following:

Jalap	2 scruples.
Sulphate of potassa.....	2 scruples.
Scammony	1 scruple.
Gamboge	10 grains.

Make into an electuary with honey and give the same dose as the preceding.

1059. Mattauer's Aperient.

Am. Dr.

Aloes	6 drams.
Bicarbonate of soda	10 drams.
Compound tincture of lavender	2 fl. ounces.
Water	32 ounces.

1060. Maury's Ointment.

Year Book of Pharm.

Nitrate of mercury ointment 1 dram.
 Powdered rhubarb,
 Powdered opium, of each.. $\frac{1}{2}$ dram.
 Cosmoline, enough to make. 1 ounce.

Triturate the rhubarb and opium together with the cosmoline, until a perfectly smooth, homogeneous product is obtained. Then mix with it the citrine ointment, after having previously rubbed the same with about 1 fluid dram of glycerine to remove any granulation present, using in the latter action a bone spatula to work with.

1061. McDade's Succus Alterans.

Dr. Circ.

Fluid extract of sarsaparilla,
 Fluid extract of stillingia,
 Fluid extract of burdock,
 Fluid extract of prickly ash,
 Equal parts.

1062. McDade's Succus Alterans.

Dr. Circ.

Fluid extract of sarsaparilla 2 ounces.
 Fluid extract of stillingia 2 ounces.
 Fluid extract of burdock.. 2 ounces.
 Fluid extract of poke root 2 ounces.
 Tincture of prickly ash.... 1 ounce.
 Aromatic elixir, enough to make 1 pint.

1063. Meig's Mixture of Gentian and Iron.

Kilner.

Citrate of iron and ammonia 1 part.
 Fluid extract of gentian.... $\frac{1}{2}$ part.
 Compound spirits of lavender 8 parts.
 Alcohol 4 parts.
 Sugar 12 parts.
 Water sufficient to make.... 64 parts.

Mix the fluid extract with 8 parts of water; add the compound spirits of lavender; treat this with hydrated oxide of iron, and filter; mix the other ingredients with the filtrate, and repeat the filtration if necessary.

1064. Merchant's Gargling Oil.

Take $2\frac{1}{2}$ gallons linseed oil, $2\frac{1}{2}$ gallons spirits of turpentine, 1 gallon western petroleum, 8 ounces liquor potassa, soap grease 1 ounce; mix all together, and it is ready for use.

1065. Merchant's Gargling Oil.

West. Dr.

Crude petroleum 13 fl. ounces.
 Ammonia water 6 ounces.
 Soft soap 16 ounces.
 Benzin 16 ounces.
 Oil amber, crude, 2 ounces.
 Tincture iodine 1 fl. ounce.
 Water 5 pints.

Mix the petroleum and soap, add the ammonia water, oil amber and tincture of iodine, and mix thoroughly. Then add the benzin, and finally the water.

1066. Merriman's Kaliodont.

Dr. Circ.

Castile soap, white, 9 drams.
 Glycerine 9 drams.
 Simple syrup 4 fl. ounces.
 Water 26 fl. ounces.
 Alcohol 26 fl. ounces.
 Tincture of cardamom
 ($\frac{1}{2}$ ounce to 1 pint alcohol) $\frac{1}{2}$ fl. ounce.
 Tincture of Canada
 snakeroot (1 ounce to
 1 pint alcohol) $\frac{1}{2}$ fl. ounce.
 Oil of peppermint 45 minims.
 Oil of wintergreen 45 minims.
 Oil of cloves 12 minims.
 Oil of cassia 12 minims.
 Oil of peppermint 4 minims.
 Ammoniacal solution of carmine,
 sufficient to color.

Mix the soap, glycerine, syrup and water; stir well and add the alcohol. Add the remainder of the ingredients, let stand a few days, and filter at a low temperature, so that no soap will afterwards precipitate.

1067. Metz's Balsam.

Cooley.

Linseed oil and olive oil, of each 6 ounces; oil of laurel berries, 1 ounce; common turpentine, 2 ounces; melt by a gentle heat, and add of verdigris, 3 drams; aloes, 2 drams; sulphate of zinc, $1\frac{1}{2}$ dram (all in powder); mix well, strain or pour the liquid into a bottle, and add oil of juniper, 4 drams; oil of cloves, 1 dram.

1068. Mexican Mustang Liniment.

Oil turpentine..... $\frac{1}{4}$ dram.
 Oil thyme..... $\frac{1}{2}$ dram.
 Oil amber, crude..... $\frac{1}{2}$ dram.
 Franklin oil*..... 1 dram.
 Kerosene oil..... 3 drams.
 Water 3 ounces 2 drams.
 Gum senegal..... 6 drams.

*Black oil: A petroleum lubricating oil. Make into an emulsion.

1069. Mexican Mustang Liniment.

Petroleum 2 ounces.
 Ammonia water..... 1 ounce.
 Brandy 1 dram.

1070. Mexican Mustang Liniment.

Crude oleic acid..... 6 parts.
 Crude petroleum..... 5 parts.
 Ammonia water..... 25 parts.
 Naphtha 5 parts.
 Water, sufficient.

Mix the first 4 ingredients, and add enough water to make the whole measure 40 parts.

1071. Meyer's Bitter Water.

Hager.

Magnesium sulphate, crystal-
 ized 60.0
 Sodium sulphate crystallized.... 5.0
 Dissolve in
 Cold distilled water..... 905.0

Filter the solution into a bottle and add Sodium bicarbonate..... 14.

Without agitation. Introduce into the bottle

Sulphuric acid, diluted..... 20.0

And securely cork. Set aside in a cold locality, frequently agitating, until complete solution is effected.

1072. Micajah Medicated Uterine Wafers.

Mercury bichloride..... 1-16 grain.
 Zinc sulphate..... 5 grains.
 Bismuth subnitrate..... 15 grains.
 Acacia 5 grains.
 Carbolic acid..... 3 grains.
 Water, enough.

1073. Milburn's Mixture.

Kilner.

Precipitated chalk..... 2 drams.
 Loaf sugar..... 2 drams.
 Powdered gum arabic.... 2 drams.
 Mint water (green pre-
 ferred) 4½ ounces.
 Laudanum 10 drops.
 Spirits of lavender com-
 pound 2 drams.
 Simple syrup..... 1½ ounces.
 Tincture kino..... 1 ounce.

1074. Mitchell's Eye Salve.

New Idea.

Petrolatum (white)..... 350 grains.
 White wax..... 130 grains.
 Oxide of zinc..... 45 grains.
 Oxide of mercury..... 5 grains.
 Oil of lavender..... 10 drops.

Melt the white wax and petrolatum together and stir constantly while cooling. As soon as the mass begins to solidify incorporate the oxides and oil of lavender.

1075. Monse's Tannic Acid Haemostatic Liqueur.

Hager.

Crude alum (free from iron) 3
 Dissolved in
 Rose water..... 100
 Add
 Tannic acid..... 1½
 Shake to make solution.

1076. Moore's Essence of Life.

Dr. Circ.

Spirits of camphor..... 2 ounces.
 Senna 1 ounce.
 Squills 1 ounce.
 Licorice ball..... 4 ounces.
 Coriander 1 ounce.
 Tincture of opium..... 2 ounces.
 Blood root,
 Digitalis, of each..... 2 drams.
 Rum 1 gallon.

Mix all together and digest for fourteen days, then press and strain.

1077. Morse's Syrup of Wild Cherry and Tar.

Drug. Circ.

Fluid extract of wild
 cherry (for syrup)... 3½ fl. ounces.
 Tar water..... 24 fl. ounces.
 Sugar 40 ounces.
 Sulphate of morphine.. 8 grains.
 Syrup of squill..... 5 fl. ounces.

1078. Dr. Murphy's Carminative.

A. P. A.

Tincture of valerian..... ½ part.
 Vinous tincture of op-
 ium 10 drams.
 Powdered camphor 128 grains.
 Potassium carbonate 4 drs. 8 grs.
 Oil of anise..... 40 minims.
 Oil of peppermint..... 40 minims.
 Water 1½ pints.

1079. Nikolaky's Application for Burns.

A. P. A.

Tannin and alcohol, each 1 part; ether, 8 parts; paint the burned portions two or three times daily, first washing with an antiseptic solution and sprinkling lightly with iodoform.

1080. Oleoze Co.

Used to disguise the taste of unpleasant remedies.

Oil of lavender..... 1 part.
 Oil of cloves..... 1 part.
 Oil of cinnamon..... 1 part.
 Oil of thyme..... 1 part.
 Oil of citron..... 1 part.
 Oil of mace..... 1 part.
 Oil of orange flower..... 1 part.
 Balsam Peru..... 3 parts.
 Alcohol 240 parts.

The value of the preparation depends

much on the quality of the oils and the use of deodorized alcohol.

1081. Orange Blossom.

West. Drug.

Zinc sulphate..... 60 grains.
 Alum 15 grains.
 Oil of almond..... 90 grains.
 Extract of hyoscyamus... 10 grains.
 White wax..... 30 grains.
 Oil of theobroma..... 180 grains.
 Make into oblong suppositories weighing 33 grains.

1082. Orange Blossom.

Boric acid..... 8 parts.
 Extract witch hazel..... 1 part.
 Alum 3 parts.
 Extract belladonna..... $\frac{1}{8}$ part.
 Olive oil, a sufficient quantity.
 Make into a stiff mass with the olive oil, roll and cut into suppositories weighing about 30 grains each, and wrap in tin foil.

1083. Oriental Oil.

West. Drug.

Linseed oil..... 16 fl. ounces.
 Camphor 1 dram.
 Oil cajuput..... 1 dram.
 Oil cedar..... 1 dram.
 Oil origanum..... 1 dram.
 Oil aniseed..... 1 dram.
 Oil wintergreen..... 1 dram.

1084. Orvalstropfen-Carminative Drops.

Hager.

Tincture aromatica 50 grams.
 Tincture galangal 10 grams.
 Tincture orange peel 10 grams.
 Tincture calamus 10 grams.
 Spirit juniper 20 grams.
 Oil fennel 5 drops.
 Oil anise 5 drops.

1085. Osgood's Indian Cholagogue.

Am. Dr.

Sulphate of quinine, 2 drams; fluid extract of leptandra, 2 drams; saturated tincture of stillingia, 4 ounces; fluid extract of podophyllum, 3 drams; oil of sassafras, 10 drops; oil of wintergreen, 10 drops; molasses sufficient to make 8 fluid ounces.

1086. Owen's Compound Extract Buchu.

Kllner.

Buchu leaves in
 coarse powder 12 ounces.
 Uva ursi in
 coarse powder 4 ounces.
 Alcohol 3 pints.
 Water 6 pints or q. s.

Treat the leaves by maceration and displacement, first with a portion of the alcohol, and then with the remainder mixed

with the water; evaporate the resulting liquid by a gentle heat to 3 pints, and to this add—

Sugar $2\frac{1}{2}$ pounds.

Continue the heat until the sugar is dissolved, and after removing from the fire add—

Oil of cubebs 1 fl. dram.

Oil of juniper 1 fl. dram.

Spirits of nitrous ether. 12 fl. ounces.

Previously mixed. Mix the whole together with a portion of the alcohol, and shake well.

1087. Ozonin.

Ch. Ztg.

One hundred and twenty-five parts of resin is dissolved in 200 parts oil of turpentine, and to this solution is added a solution of 22.5 parts of potassium hydrate in 40 parts of water; also 90 parts of hydrogen peroxide. This exposed to light changes in two or three days to a thin fluid called ozonin. An emulsion of 1 gram of ozonin in 1 liter of water acts as an energetic bleaching agent on fibres, wood, cork, straw, paper, on solutions of gums, and soaps, acting equally well in acid or alkaline solutions.

1088. Parr's Life Pills.

Dr. Circ.

Aloes 7 pounds.
 Rhubarb 5 pounds.
 Jalap 5 pounds.
 Extract of gentian $3\frac{1}{2}$ pounds.
 Soft soap $\frac{1}{2}$ pound.
 Licorice powder..... $4\frac{1}{2}$ pounds.
 Molasses $4\frac{1}{2}$ pounds.
 Moist sugar $4\frac{1}{2}$ pounds.
 Oil of cloves 10 ounces.
 Oil of caraway $3\frac{1}{2}$ ounces.

Mix into a mass, to be divided into $3\frac{1}{2}$ -grain pills.

1089. Pardee's Specific.

Am. Pharm.

Tincture iodine 1 dram.
 Tincture aconite 1 dram.
 Wine colchicum 2 ounces.
 Potassium nitrate 2 ounces.
 Potassium iodide 5 drams.
 Camphor water 2 ounces.
 Compound syrup

sarsaparilla 8 ounces.

The potassium nitrate and potassium iodide are rubbed to a very thin powder and dissolved in the camphor water before mixing with the other ingredients.

1090. Paul's Aperient Pills.

Hager.

Podophyllin 0.3.
 Castile soap 0.3.
 Honey, q. s.

Make into 10 pills.

1091. Pavesi's Cosmetic.

(Monde. Phar.)

Sodium borate 10 parts.
 Glycerine, pure 20 parts.
 Tincture benzoin 15 parts.
 Rose water 150 parts.

Mix, let stand several days, filter, and bottle.

1092. Peacock's Bromides.

West. Dr.

Potassium bromide 640 grains.
 Sodium bromide..... 640 grains.
 Ammonium bromide 384 grains.
 Calcium bromide 192 grains.
 Lithium bromide 64 grains.
 Extract vanilla 1 fl. ounce.
 Sugar 10 ounces av.
 Water sufficient

to make 16 fl. ounces.

Dissolve the salts in 8 ounces of water, and the extract mixed in the liquid filtered; dissolve the sugar without heat and strain.

1093. Peerboom's Nerve Solution.

Hager.

Purified potassium carbonate.... 15.0
 Soft soap..... 20.0

Dissolve in

Distilled water..... 200.0

Then mix and add to the solution

Oil turpentine..... 30.0
 Oil cajuput..... 5.0
 Spirit juniper..... 20.0

1094. Perry's Compound Sarsaparilla Blood Purifier.

Kilner.

Turkey corn root..... 2 pounds.
 Stillingia root..... 2 pounds.
 Sarsaparilla root..... 2 pounds.
 Yellow dock root..... 2 pounds.
 Sassafras bark..... 1 pound.
 Simple syrup.. 2 gallons.
 Diluted alcohol..... 32 pints.
 Water, sufficient quantity.

Iodide potassium..... 2 pounds.

Percolate roots and bark with diluted alcohol, add syrup, then add iodide potassium. Dissolve in water to make six gallons.

1095. Perry's Quaker Vermifuge.

Kilner.

Alexandria senna..... 1 pound.
 Pink root..... 2 pounds.
 White sugar..... 6 pounds.
 Alcohol. 1 pint.
 Carbonate potassium.. 3 ounces.
 Santonin..... 3 ounces.
 Oil caraway..... 1½ drams.
 Oil anise..... 1½ drams.
 Water to make..... 1 gal. of syrup.

1096. Pettitt's Eye Salve.

Olive oil..... 4 drams.
 Spermaceti1½ drams.
 White wax..... ½ dram.

Melt together and add gradually under trituration in a warm mortar to the following in fine powder, and thoroughly mix.

White precipitate.... 20 grains.
 Oxide zinc..... 30 grains.
 Acid benzoic..... 2 grains.
 Morphine sulphate..... ¾ grain.
 Oil rosemary..... ½ grain.

Finally stir until cool and preserve in a well-covered vessel.

1097. Phalon's Instantaneous Hair Dye.

No. 1. To 1 ounce pyrogallic acid, and 1¼ ounces tannin, dissolved in 2 ounces of alcohol, add 1 quart of soft water.

No. 2. To 1 ounce crystallized nitrate of silver, dissolved in 1 ounce concentrated aqua ammonia, add 1 ounce gum arabic, and 14 ounces soft water. Keep in the dark.

1098. Phalon's Hair Restorative.

To 8 ounces of 90 per cent alcohol, colored by few drops of alkanet root, add 1 ounce of castor oil, and perfume with a compound of bergamot, neroli, verbena and orange.

1099. Phalon's Hair Dye (One Preparation).

To 1 ounce crystallized nitrate of silver, dissolved in 2 ounces of aqua ammonia, add 5 ounces soft water. This is not an instantaneous dye; but after exposure to the light and air, a dark color is produced upon the surface to which it is applied. Remember to remove all grease, etc., from the hair before applying these dyes.

1100. Phenosalyl.

Ann. del'Inst. Pasteur.

Nine parts carbolic acid, 1 part salicylic acid, 2 parts lactic acid and 1-10 part menthol.

1101. Phoenix Disinfectant.

Dr. Circ.

Clay 9 ounces.
 Ferric chloride..... 83 grains.
 Ferric oxide..... 1 ounce.
 Lime ½ ounce.
 Carbolic acid..... 26 grains.

1102. Dr. Pierce's Golden Medical Discovery.

Hager.

Honey	15 grams.
Lactucarium	1 gram.
Tincture opium.....	2 grams.
Alcohol (64 per cent).....	100 grams.
Water	105 grams.

1103. Pierce's Favorite Prescription.

Hager.

For a similar prescription use:

Savin	150 grains.
Cinchona	150 grains.
Agaric	75 grains.
Cinnamon	75 grains.
Water, enough to make a decoction of.....	8 fl. ounces.
Acacia	150 grains.
Sugar	75 grains.
Tincture digitalis.....	½ fl. dram.
Tincture opium.....	½ fl. dram.
Oil star anise.....	8 drops.
Alcohol	2 fl. ounces.

Dissolve the gum acacia and sugar in the strained decoction, then add the alcohol in which the oil of star anise has been dissolved.

1104. Pillast Mixtura Anticholerica.

Hager.

Infusion peppermint (e. 5.0)	120.0
Syrup	30.0
Tincture opium (croco) ..	2.5
Ether	5.0
Carbon bisulphide.....	20 drops.

1105. Lydia E. Pinkham's Vegetable Compound.

New Idea.

Whatever this preparation contains it is certainly there in homoeopathic quantities. Some time ago we found it to contain only about 2.2 grains of solid, non-volatile matter in each fluid ounce. The average amount in fluid extracts is about 90 to 100 grains in every fluid ounce. It contained also about 16 per cent. of alcohol as a preservative.

1106. Pintschovius' Plasters (for Lupus).

Hager.

Wax	4
Colophony	2
Olive oil.....	2
Pure carbolic acid.....	5

1107. Piso's Consumption Cure.

T. R. Mason, M. D.

Morphia sulphate.....	4 grains.
Chloroform (Squibb).....	4 drams.
Syrup simple.....	2 drams.
Glycerine	3½ drams.
Acid hydrocyanic dil.....	1 dram.
Chlorophyll (to color).	

1108. Piso's Consumption Cure.

New Idea.

Tincture tolu.....	½ ounce.
Fluid extract lobelia.....	2 drams.
Fluid extract cannabis indica	2 drams.
Chloroform	1 dram.
Sulphate morphia.....	4 grains.
Tartar emetic.....	4 grains.
Essence mentha viridis....	10 drops.
Water	8 ounces.
Sugar	14 ounces.

Mix the fluid extracts, tincture tolu, chloroform and essence of spearmint and shake with the sugar in a bottle. Dissolve the morphine and tartar emetic in hot water, then add the water to the sugar in a bottle.

1109. Piso's Consumption Cure.

Morphine sulphate.....	8 grains.
Acid hydrocyanic, diluted	2 fl. drams.
Chloroform	4 drams.
Glycerine	7¼ fl. ounces.
Syrup, enough to make	16 fl. ounces.

Mix, and color green with chlorophyll.

1110. Plant's Asthma Cigarettes.

Phar. Post.

Stramonium leaves.....	8 parts.
Pulverized green tea leaves..	8 parts.
Lobelia leaves	7 parts.

Mix, and moisten with a saturated solution of potassium nitrate. Dry thoroughly and preserve in hermetically sealed cans.

1111. Plantation Bitters.

Chem. and Dr.

Angostura bark.....	4 ounces.
Cnainomile flowers.....	1 ounce.
Cardamom seed.....	2 drams.
Cinnamon bark.....	2 drams.
Orange peel.....	1 ounce.
Raisins.....	1 pound.
Diluted alcohol.....	2 gallons.

Macerate for a month, press, and filter.

1112. Platt's Chlorides.

Dr. Circ.

Zinc, in strips.....	4 ounces.
Carbonate of lead.....	2 ounces.
Chlorinated lime.....	1 ounce.
Carbonate of magnesium	½ ounce.
Hydrate of aluminium....	1½ ounces.
Carbonate of potassium.	½ ounce.
Hydrochloric acid.....	16 ounces.
Water	16 ounces.

Whiting, a sufficient quantity.

First dissolve the zinc in the acid, then add the other salts singly, each in its order, and let stand until each is dissolved before adding the next. When all are dissolved, add the water to the solution, and after a couple of hours add a little whiting to neutralize any excess of acid; then filter.

1113. Platt's Chlorides.

Dr. Circ.

Aluminum sulphate 6 ounces.
 Zinc chloride $1\frac{1}{3}$ ounces.
 Sodium chloride 2 ounces.
 Calcium chloride 3 ounces.
 Water, sufficient to make 2 pints.

1114. Pleis' Fit Powders.

Potassium bromide 15 grains.
 Powdered gentian 5 grains.

1115. Quickline.

Am. Jour. Pharm.

Carbolic acid 1. part.
 Mercuric chloride 0.02 part.
 Alcohol and water 1,000. parts.

1116. Quina Laroche.

Dr. Circ.

Red cinchona bark 50 grams.
 Sherry wine 1,000 grams.
 Diluted alcohol 500 grams.
 Sugar 800 grams.
 Pyrophosphate of iron .. 30 grams.
 Water, a sufficient quantity.

Infuse the cinchona in enough water to yield 500 grams of liquid; in this dissolve the iron salt, add the wine and alcohol, let stand several days and filter.

1117. Radam's Microbe Killer.

Goodman.

Composed of pure water charged with the gases generated from:

Flowers sulphur,
 Sodium nitrate,
 Manganese dioxide,
 Sandal wood,
 Potassium chlorate.

1118. Radam's Microbe Killer.

R. G. Eccles.

Oil of vitriol (impure) 4 drams.
 Muriatic acid (impure) 1 dram.
 Red wine, about 1 ounce.
 Well or spring water 1 gallon.

1119. Radcliff's Elixir.

Kilner.

Aloes 4 drams.
 Cinnamon $\frac{1}{2}$ dram.
 Zedoary $\frac{1}{2}$ dram.
 Cochineal $\frac{1}{2}$ dram.
 Rhubarb 1 dram.
 Alcohol, q. s.

Simple elixir, to make 1 pint.

Digest the drugs with the alcohol for 1 week, and transfer to percolator; when 6 ounces of the percolate is obtained, add simple elixir.

1120. Radway's Ready Relief.

Hager.

Tincture of capsicum 64. grams.
 Water ammonia 4. grams.
 Castile soap 1.4 grams.
 Camphor 0.4 grams.
 Oil of rosemary 0.2 grams.

1121. Radway's Ready Relief.

Soap liniment, about $1\frac{1}{2}$ ounces.
 Tincture capsicum, about.. $\frac{1}{2}$ ounce.
 Water of ammonia, about $\frac{1}{2}$ ounce.
 Alcohol, about $\frac{1}{2}$ ounce.

1122. Ransom's Hive Syrup and Tolu.

New Idea.

Fluid extract squills 2 fl. drams.
 Fluid extract senega 2 fl. drams.
 Soluble essence tolu 2 fl. drams.
 Tartar emetic 4 grains.
 White sugar 4 ounces. av.
 Water to make 4 fl. ounces.

It is readily prepared by rubbing the tartar emetic and sugar well together, adding the fluid extracts and essence of tolu, and then enough water to make, after short, slight heating and straining, 4 fluid ounces. Each fluid ounce of the syrup contains 1 grain of tartar emetic.

1123. Reid's Cholera Syrup.

Med. & Surg. Reporter.

Chloroform 1 ounce.
 Gum camphor 3 ounces.
 Tincture opium 1 pint.
 Best French brandy 2 pints.
 Tincture cloves 8 ounces.
 Simple syrup $\frac{1}{2}$ gallon.

1124. Remy's Antiseptic Solution.

Ph. Centr.

Red iodide of mercury.. 4 grains.
 Alcohol $6\frac{1}{4}$ fl. ounces.
 Water 11 pints.

1125. Reynold's Specific.

Chem. and Drug.

Sherry wine 1 pint.
 Colchicum bulbs $\frac{1}{2}$ pound.
 Jamaica rum 1 ounce.
 Poppy flowers sufficient to color.

1126. Richmond's Samaritan

Nervine.

D. C.

Bromide of potassium 1 ounce.
 Sugar 1 ounce.
 Caramel 20 minims.
 Water 5 ounces.
 Oil of cassia 10 minims.

Dissolve the first three ingredients in the water, and add the oil.

1127. Richter's Pain Expeller.

New Idea.

From 200 parts of cayenne pepper make 600 parts tincture; add a solution of 22 parts of soap in 100 water; add thereto:

Water of ammonia..... 300 parts.
Camphor 30 parts.
Oil rosemary, lavender,
thyme and cloves, of
each 10 parts.
Oil cinnamon..... 1½ parts.
Sugar color, quantity sufficient.

Mix and filter.

1128. Roche's Embrocation.

Phar. Ztg.

Oil of amber..... 4 parts.
Oil of clove..... 4 parts.
Olive oil..... 15 parts.

1129. Roche's Embrocation.

The English formula reads as follows:

Olive oil..... 20 parts.
Oil of clove..... 10 parts.
Oil of amber..... 10 parts.

1130. Roche's Embrocation.

West. Dr.

Asafoetida 2½ drams is digested with 8 fluid ounces of olive oil for several hours. The clear solution is decanted and mixed with 2 drams each of oils of caraway and turpentine, and a few drops of gaultheria.

1131. Rossbach's Expectorant

Mixture.

A. P. A.

Hydrochlorate of apomor-
phine 1 grain.
Hydrochlorate of mor-
phine ½ grain.
Diluted hydrochloric acid. 10 drops.
Distilled water..... 5 fl. ounces.

1132. Rotter's Antiseptic.

Merck's Bull.

Zinc chloride..... 45 grains.
Zinc sulpho-carbolate.... 45 grains.
Boracic acid..... 27 grains.
Sodium chloride..... 2½ grains.
Salicylic acid..... 6 grains.
Citric acid..... 1 grain.
Thymol 1 grain.

The whole to be dissolved in one pint of water.

1133. Royal Germetene.

H. R. Slack, in Dixie Doctor, states that by adding 2 ounces sulphuric acid to 1 ounce water saturated with sulphuretted hydrogen, and sufficient hydrant or well water to make 1 gallon, you will have a compound that will give the chemical and physiological effects of this preparation.

1134. Madame Ruppert's Face Bleach.

Druggists' Circular.

Corrosive sublimate 8 grains, tincture of benzoin 1 dram, and water 8 ounces.

1135. Dr. Sage's Catarrh Remedy.

Hager.

A powder consisting of ½ part carbolic acid, ½ part camphor, and 10 parts of salt.

1136. Sage's Catarrh Cure.

New Idea.

Powdered golden seal..... 1 ounce.
Chloride of sodium..... 10 grains.
Powdered borax..... 10 grains.
Prussian blue, q. s. to color.

1137. Sage's Catarrh Remedy.

Kilner.

Powdered hydrastis can-
densis 5 drams.
Indigo ½ dram.
Powdered camphor..... 2 drams.
Carbolic acid..... 2 drams.
Common salt..... 50 drams.

Powder the camphor by means of alcohol, and mix with salt previously reduced to a fine powder. Rub the indigo and carbolic acid together, mix with salt and camphor, and add the powdered hydrastis. Mix intimately, without pressure, in a mortar.

1138. Salmon's Drops of Life.

Bull. of Pharm.

Tincture of castor..... 8 fl. ounces.
Tincture of opium..... 3 fl. ounces.
Saffron 4 drams.
Cochineal 2 drams.
Camphor 2 drams.
Nutmeg 2 drams.
Antimonial wine..... 1 pint.
Water 1 pint.

Digest for 10 days and filter.

1139. Schenck's Pneumonic Syrup.

Wormwood, catnip, tansy, hyssop, horehound, hops, chamomile, comfrey, senega and elecampane, of each 4 drams. Boll with sufficient water to make, after straining, one quart; add gum arabic one and one-half ounce, and licorice one and one-half ounce. Then add one good-sized Indian turnip, and finally sugar 3 pounds, brandy one-half pint, juice of 2 lemons.

1140. Scott's Five-Minute Fragrant Pain-Curer.

New Remedies.

Ether 6 grams.
Glycerine 21 grams.
Table salt..... 3½ grams.
Water 170 grams.

1141. Scoville's Compound Syrup of Sarsaparilla.

West. Dr.

Bamboo brier.....	9 ounces.
Sarsaparilla	8 ounces.
Burdock	8 ounces.
Yellow dock.....	8 ounces.
Stillingia	6 ounces.
False bitter sweet.....	4 ounces.
Dandelion	3 ounces.
Juniper berries.....	3 ounces.
Turkey pea.....	2 ounces.
Guaiac chips.....	2 ounces.
Prickly ash berries.....	1 ounce.

All in coarse powder. Moisten with alcohol, pack in a steam displacement apparatus, and, after three days, pass through the vapor of 3 pints of alcohol. Continue the displacement with steam until exhausted. Set aside the 3 pints of alcoholic liquid and evaporate the decoction to 2 pints. Mix this with the tincture, add 6 pints of sugar-house molasses, and when cold dissolve in the same 1½ ounces of potassium iodide.

1142. Seeley's Sulphate of Manganese.

Dr. Circ.

Sulphate of manganese....	17 ounces.
Ferric sulphate.....	8 ounces.
Sulphuric acid.....	11 ounces.
Muriatic acid.....	2 ounces.

1143. Seiler's Antiseptic Wash.

Sodium bicarbonate.....	8 drams.
Borax	8 drams.
Sodium benzoate.....	20 grains.
Sodium salicylate.....	20 grains.
Eucalyptol	10 grains.
Thymol	10 grains.
Menthol	5 grains.
Oil wintergreen.....	6 drops.
Glycerine	8½ fl. ounces.
Alcohol	2 fl. ounces.
Water q. s. ad.....	16 pints.

Dr. Seiler gives these directions for preparing the compound: Dissolve all the volatile ingredients in the alcohol, rub up the solution with the sodium salts, and dissolve in the water, finally adding the glycerine. Allow to stand in a large bottle with occasionally shaking for at least two weeks before dispensing.

1144. Senckenberg's Migraine Pastilles.

Antipyrin	0.30
Antifebrin	0.05
Rhubarb	0.05
Calamus	0.02
Cinchona bark	0.03

1145. Sel de Pennes.
Dorvault.

Sodium carbonate, effloresced	250 grams.
Sodium phosphate.....	10 grams.
Sodium sulphate effloresced	5 grams.
Sodium borate	5 grams.
Sodium chloride	50 grams.
Potassium iodide	1 gram.
Ferrous sulphate	1 gram.
Oil rosemary	10 drops.
Oil lavender	5 drops.
Oil thyme	10 drops.

Add, in small quantities at a time, the effloresced carbonate of sodium to the ferrous sulphate, mixing well after each addition. To the mixture add the remaining salts and the oils, thoroughly triturating.

1146. Seven Seals or Golden Wonder.
West. Dr.

Ether	6 fl. drams.
Chloroform	4 fl. drams.
Camphor, or camphoraceous oil	4 fl. drams.
Oil of peppermint	2 fl. drams.
Tincture of capsicum	5 ounces.
Alcohol (90 per cent)	8 ounces.

1147. Seven Sutherland Sisters' Hair Grower.

New Idea.

Bay rum	7 fl. ounces.
Distilled water of witch hazel	9 fl. ounces.
Common salt	1 dram.
Hydrochloric acid (5 per cent)	1 drop.
Magnesia, q. s.	

Mix the bay rum and distilled extract of witch hazel and shake with a little magnesia, filter, and in the filtrate dissolve the salt and add the hydrochloric acid. The agitation with magnesia causes the preparation to assume a yellow color, but by rendering it very slightly acid with 1 drop of 5 per cent hydrochloric acid this color all disappears.

1148. Sheffield's Creme Dentifrice.
Dr. Circ.

Castile soap in fine powder	½ ounce.
Prepared chalk	1 ounce.
Oil of rose geranium	8 drops.

Whether oil of rose geranium or some other oil be used as a flavoring is, of course, a matter of taste. Both wintergreen and peppermint are popular flavors, while spearmint is probably more grateful to many mouths than either. A pink color may be given by the addition of a small quantity of cochineal coloring.

1149. Shiloh's Consumption Cure.

New Idea.

Chloroform	2 drams.
Alcohol	1 ounce.
Oil of peppermint	10 drops.
Oil of tar	1 dram.
Muriate of morphine	4 grains.
Water	1 ounce.
Dilute hydrocyanic acid....	1 dram.
Powdered extract licorice..	2 drams.
Tincture lobelia	4 drams.
Simple syrup sufficient to make	1 pint.

1150. Mother Siegel's Syrup.

New Idea.

Concentrated decoction of aloes (1 to 4).....	60. grams.
Borax	1.3 grams.
Capsicum, powdered....	0.13 grams.
Gentian, powdered.....	2.3 grams.
Sassafras oil	0.3 grams.
Wintergreen oil	0.12 grams.
Rectified spirit	7.5 grams.
Fluid extract dande- lion	7.5 grams.
Syrup	125. grams.

1151. Simmons' Liver Regulator.

Kilner.

Liverwort	1 ounce.
Leptandra	1 ounce.
Serpentaria	1 ounce.
Senna	1½ ounces.
Water	2½ pints.
Whisky	½ pint.

Bring the water to a boil, and pour over the drugs; let stand 1 day; strain the whisky.

1152. Sloan's Ointment.

Every-Day Wants.

Resin, 4 ounces; beeswax, 4 ounces; lard, 8 ounces; honey, 2 ounces. Melt these articles slowly, gently bringing to a boil; and, as it begins to boil, remove from the fire and slowly add a little less than a pint of spirits of turpentine, stirring all the time this is being added, and stir until cool.

1153. Smith's Tonic Syrup.

New Idea.

Quinine sulphate	30 grains.
Cinchonine sulphate	30 grains.
Fluid extract mandrake..	2 fl. drams.
Tincture cardamoms compound	½ fl. dram.
Ammonio-citrate of iron.	64 grains.
Sugar	10 ounces.
Water	6 ounces.
Sugar syrup, q. s.....	1 pint.

If need be, use a few drops aromatic sulphuric acid.

1154. Smith's Electric Oil.

Kilner.

Linseed oil	4 pints.
Olive oil	8 pints.
Sassafras oil	1 pint.
Chloroform	½ pint.

1155. Spaulding's Glue.

Every-Day Wants.

First soak in cold water all the glue you wish to make at one time; using only glass, earthen or porcelain dishes; then by gentle heat dissolve the glue in the same water, and pour in a little nitric acid, sufficient to give the glue a sour taste, like vinegar, or 1 ounce to each pound of glue.

1156. St. Jacob's Oil.

Br. Col. Dr.

Camphor	1 ounce.
Chloral hydrate	1 ounce.
Chloroform	1 ounce.
Ether	1 ounce.
Tincture opium	4 drams.
Oil origanum,	
Oil sassafras	aa. 4 drams.
Alcohol to make	80 ounces.

Dissolve.

1157. St. Jacob's Oil.

Ephemeris.

Squibb says that it is a weak alcoholic liniment, also containing ether, alcohol, turpentine, red coloring matter, and water.

1158. St. Jacob's Oil.

Gum camphor	3 drams.
Hydrate chloral	2 drams.
Chloroform	2 drams.
Ether	2 drams.
Tincture opium	2 drams.
Oil origanum	2 drams.
Oil sassafras	2 drams.
Oil cloves	½ ounce.
Tincture cochineal	2 drams.
Alcohol	2 pints.

1159. Steer's Opodeldoc.

Sci. Am. Cyc. Rec.

White castile soap, cut small, 2 pounds; camphor, 5 ounces; oil of rosemary, 1 ounce; oil of origanum, 2 ounces; rectified spirit, 1 gallon. Dissolve in a corked bottle by the heat of a water-bath, and when quite cool, strain. Then add ammonium hydroxide, aqua ammonia, 11 ounces; immediately put it in bottles, cork close, and tie over with bladder. It will be very fine, solid and transparent when cold. The liquid opodeldoc is prepared by taking 2 ounces castile soap shavings and dissolving them in 1 quart alcohol, with gentle heat; then add 1 ounce camphor, ½ ounce oil of rosemary, and 2 ounces spirits hartshorn, aqua ammonia.

1160. Steer's Opodeldoe.

Drug. Hand Book.

Castile soap, 3 ounces; oil of rosemary, 1 dram; camphor, 1 ounce; oil of origanum, 1 dram; alcohol, 1 pint. Place the soap and camphor in a wide-mouthed bottle, with the alcohol, and by means of heat and water-bath dissolve them. Filter, and add the other articles.

1161. Stoughton Bitters.

Gentian, 4 ounces; orange peel, 4 ounces; calumba, 4 ounces; chamomile flowers, 4 ounces, quassia, 4 ounces, burned sugar, 1 pound; whisky, 2½ gallons. Mix and let it stand for one week. Bottle the clear liquid.

1162. Stoughton Bitters.

Dr. Circ.

Gentian root.....	8 pounds.
Orange peel.....	4½ pounds.
Chamomile flowers.....	2 pounds.
Cloves	1½ pounds.
Lavender flowers.....	1½ pounds.
Cassia bark.....	1½ pounds.
Coriander seed.....	1½ pounds.
Pimento	2 pounds.
Red saunders.....	½ ounce.
Alcohol	30 gallons.

1163. Stoughton Bitters.

Dr. Circ.

Orange peel.....	6 ounces.
Gentian root.....	8 ounces.
Virginia snake root.....	1½ ounces.
American saffron.....	½ ounce.
Red saunders.....	½ ounce.
Alcohol	4 pints.
Water	4 pints.

Grind the solids to coarse powder, macerate with the alcohol and water for 14 days, filter, and add through the residue enough diluted alcohol to make 1 gallon.

1164. Stoughton's Elixir.

Griffiths.

Aloes	1 dram.
Cascarilla.....	1 dram.
Rhubarb	4 drams.
Wormwood	6 drams.
Germander.....	6 drams.
Gentian	6 drams.
Orange peel.....	6 drams.
Alcohol	2 pints.

Macerate for four days, and filter.

1165. Strong's Arnica Jelly.

Glycerine	1 fl. ounce.
Water	1 fl. ounce.
Starch	120 grains.
Fluid extract arnica....	2 fl. drams.
Spirit bitter almond (1 in 8).....	2 minims.
Carbolic acid.....	8 minims.

Mix the glycerine and water, add the

starch, and rub in a mortar to a perfectly smooth mixture. Then heat over direct heat, constantly stirring, until a smooth jelly is produced, cool, and when nearly cold incorporate the other ingredients.

1166. Syrup Roborans.

Reg. Phar.

Hypophosphite of calcium	128 grains.
Hypophosphite of potassi- um.....	192 grains.
Phosphate of iron.....	192 grains.
Sulphate of quinine.....	64 grains.
Sulphate of strychnine....	8 grains.
Hypophosphorous acid, dilute	1 ounce.
Sugar	6 pounds.
Alcohol	1 pint.
Water	4 pints.

Dissolve the hypophosphite salts and the phosphate of iron in 3 pints of the water by rubbing them in a mortar. Dissolve the quinine and strychnine salts in the remainder of the water mixed with alcohol and hypophosphorous acid, mix the solutions and filter, then dissolve the sugar in the filtrate, by stirring or agitation.

1167. Syrupus Roborans.

Ch. and Dr.

Quinine hydrochlorate....	25 grains.
Strychnine sulphate.....	½ grain.
Distilled water.....	6 drams.
Syrup hypophosphites with iron	6 ounces.

1168. Syrup Trifolium Compound.

Formulary.

Fluid extract trifolium..	1 fl. ounce.
(red clover heads.)	
Fluid extract berberis aquifolium, (Oregon grape.)	
Fluid extract cascara, amarga,	
Fluid extract phyto- lacca (poke),	
Fluid extract lappa (bur- dock),	
Fluid extract stillingia, of each	½ fl. ounce.
Fluid extract xanthoxy- lum (prickly ash ber- ries)	1 fl. dram.
Iodide potassium.....	2 drams.
Syrup enough to make.	16 fl. ounces.

1169. Swalm's Vermifuge.

Kilner.

Wormseed	2 ounces.
Valerian, pulverized.....	1½ ounces.
Rhubarb	1½ ounces.
Pink root.....	1½ ounces.
White agaric.....	1½ ounces.

Boil in sufficient water to yield three quarts of decoction, and add to it thirty drops oil tansy, forty-five drops oil cloves, dissolved in alcohol one quart.

1170. Taft's Asthmaline.

* West. Drug.
 Potassium iodide..... 4 drams.
 Tincture belladonna..... 4 fl. drams.
 Spirit of ether..... 4 fl. drams.
 Fluid extract of grindella.. 1 fl. ounce.
 Syrup sarsaparilla com-
 pound, quantity suffi-
 cient to make..... 4 fl. ounces.

1171. Tag's Salve.

Kilner.

Fresh lard..... 1 pound.
 White wax..... 4 ounces.
 White resin..... 4 ounces.
 Balsam fir..... 1 ounce.
 Melt the lard, wax and resin together,
 add balsam fir, and stir till cold.

1172. Tamar Indien.

Union Pharm.

Tamarind pulp..... 450 grams.
 Powdered sugar..... 40 grams.
 Powdered sugar of milk.. 60 grams.
 Pure glycerine..... 50 grams.
 Mix and evaporate in a water bath to the
 consistence of a soft extract, and add:
 Powdered senna leaves... 50 grams.
 Powdered aniseeds..... 10 grams.
 Essence of lemon..... 3 grams.
 Tartaric acid..... 3 grams.
 Mix well, and divide into 100 boluses.
 These, after exposure to steam, are rolled
 in the following mixture:
 Cream of tartar..... 5 grams.
 White sugar, sugar of
 milk, of each..... 35 grams.
 Tragacanth powder..... 3 grams.
 Tartaric acid..... 2 grams.
 Red saunders powder..... 25 grams.
 Dry and wrap in tin foil.

**1173. Tarrant's Effervescent Seltzer
Aperient.**

Nat. Bottlers' Gazette.

Sodium bicarbonate..... 168 parts.
 Tartaric acid 150 parts.
 Rochelle salt..... 50 parts.
 Magnesium sulphate..... 60 parts.

**1174. Tarrant's Effervescent Seltzer
Aperient.**

Meyer Bros., Druggist.

Per Cent.

Bicarbonate of soda..... 28.25
 Rochelle salts..... 26.04
 Potassium, sodium tartar..... 30.96
 Tartaric acid, free.
 Sulphate of magnesla..... 12.89
 Magnesia28
 Silica01
 Chloride of sodium..... .17
 Total 98.60
 Loss probably tartaric acid..... 1.40

**1175. Tenncle's Vegetable Worm
Syrup.**

Santonin 27 grains.
 Oil sassafras..... 1 minlm.
 Alcohol 2 fl. ounces.
 Fluid extract pink root.... 2 fl. ounces.
 Fluid extract dandelion.... ½ ounce.
 Fluid extract golden seal.. ¼ ounce.
 Molasses ½ ounce.

1176. Thiol Opodeldoc.

Dieterich.

Dissolve 70 parts dialyzed stearin soap
 and 20 parts dialyzed olein soap with the
 aid of heat in 850 parts of alcohol, and add
 2 parts oil of lavender. Filter and add
 sufficient alcohol to bring the filtrate up to
 900 parts. Mix 50 parts liquid thiol and 50
 parts distilled water in a warm capsule,
 and add slowly to the soap solution. Fin-
 ally add 25 parts ether, thoroughly incor-
 porate and pour into molds.

1177. Thomas' Electric Oil.

Am. Dr.

Gum camphor..... ½ ounce.
 Oil wintergreen..... ½ ounce.
 Oil organum..... ½ ounce.
 Chloroform 1 ounce.
 Laudanum 1 ounce.
 Oil sassafras..... 1 ounce.
 Oil hemlock..... 1 ounce.
 Oil turpentine..... 1 ounce.
 Balsam fir..... 1 ounce.
 Tincture gualacum..... 1 ounce.
 Alcohol 4 pints.
 Tincture catechu..... 1 ounce.
 Alkanet, sufficient to color.

**1178. Thompson's Chloroform
Liniment.**

A. P. A.

Chloroform, alcohol, ammonia water,
 spirit of camphor, tincture of aconite root,
 of each 2 ounces, spirit of nitrous ether, 6
 ounces.

**1179. Thompson's Emulsion of
Linseed Oil.**

Ph. Rec.

Linseed oil..... 15 fl. ounces.
 Oil gaultheria..... 2 fl. drams.
 Oil cinnamon (cassia).. 2 fl. drams.
 Irish moss..... 4 drams.
 Water 24 fl. ounces.
 Glycerine 5 fl. drams.
 Syrup 10 fl. ounces.
 Dilute hydrocyanic
 acid 2½ fl. drams.

Make a mucilage with the Irish moss
 and water, and with this emulsify the oils;
 mix the hydrocyanic acid with the glycer-
 ine and add to the emulsion; lastly add the
 syrup and mix thoroughly.

1180. Thompson's Eye Water.

Kilner.

Sulphate of copper.....	10 grains.
Sulphate of zinc.....	40 grains.
Rose water.....	2 pints
Tincture saffron.....	4 drams.
Tincture camphor.....	4 drams.

Mix and filter.

1181. Thompson's Salve.

Beeswax	1 pound.
Fresh sweet butter.....	1 pound.
White turpentine.....	24 ounces.
Balsam fir.....	12 ounces.

1182. Thorn's Cough Candy.

New Idea.

Fluid extract horehound...	1 pound.
Fluid extract boneset.....	1 pound.
Fluid extract wild cherry..	1 pound.
Fluid extract catnip.....	1 pound.
Fluid extract elecampane..	1 pound.
Sulphate of morphia.....	1 dram.
Oil of lemon.....	2 ounces.
Cut with alcohol.....	8 ounces.
Water to dissolve morphia, quantity sufficient.	

To make 6 pounds of mixture, which is added to 100 pounds of sugar, and made into sticks running 7 or 8 to the pound.

1183. Thorn's Cough Mixture.

New Idea.

Syrup squills compound..	2 fl. drams.
Tincture opium,	
camphorated	1 fl. ounce.
Spirit nitrous ether.....	1 fl. ounce.

1184. Tobias' Derby Condition Powder.

New. Rem.

Tartar emetic.....	2 grams.
Crude antimony.....	20 grams.
Sulphur	10 grams.
Saltpetre..	10 grams.
Foenugreek	40 grams.
Juniper berries.....	20 grams.

1185. Tobias' Venetian Liniment.

New Rem.

Spirits hartshorn.....	5 parts.
Camphor	2 parts.
Tincture capsicum.....	5 parts.
Alcohol	30 parts.
Water	10 parts.

1186. Trask's Magnetic Ointment.

Ind. Phar.

Fine-cut tobacco	1 pound.
Raisins, cut fine	1 pound.
Lard	1 pound.

Simmer together over a slow fire for half a day; then strain through a linen cloth, firmly pressing out all the lard.

1187. Tropic Fruit Laxative.

Kilner.

Powdered senna leaves ...	2 ounces.
Powdered anise seed	½ ounce.
Tamarinds (pulp)	4 ounces.
Molasses, q. s., or..	16 ounces.
Mix thoroughly, make into lozenges, coated with chocolate icing, if desired.	

1188. Trousseau's Diuretic Wine.

White wine	8 pints.
Alcohol	1 pint.
Juniper berries	12 ounces.
Acetate of potassium	8 ounces.
Digitalis	2 ounces.
Squills	1 ounce.

1189. Upham's Asthma Remedy.

Kilner.

Pulverized	
stramonium leaves	8 ounces.
Pulverized	
skunk cabbage	8 ounces.
Pulverized lobelia	6 ounces.

Mix, and then dissolve 4 ounces of nitrate of potassium in 1 pint of water; mix well with the powder; dry thoroughly.

1190. Van Buskirk's Sozodont.

New Rem.

Castile soap	5 grams.
Glycerine	5 grams.
Alcohol	30 grams.
Water	20 grams.
Oil of peppermint,	
Oil of cloves,	
Oil of cinnamon,	
Oil of anise, sufficient quantity.	

1191. Van Buskirk's Sozodont.

New Idea.

Alcohol	1 ounce.
Water	1¼ ounces.
Soap	120 grains
Oil wintergreen	2 minims.
Fluid extract red saunders, q. s.	

Dissolve the soap in the mixture of alcohol and water; add the color; perfume with the wintergreen; add enough water to make the fluid measure 3 fluid ounces.

1192. Vigier's Antiseptic Dentifrice.

(Gaz. Heb.)

Resorcin	20 parts.
Salol	40 parts.
Orris root	80 parts.
Chalk, levigated	400 parts.
Carmine, No. 40	3 parts.
Oil of peppermint, q. s. to perfume.	

Mix. Instead of oil of peppermint any of the fragrant essential oils may be used.

1193.

Vitalizer.

Kilner.

Yellow root	1 dram.
Wild cherry bark	2 drams.
Mandrake root	$\frac{1}{4}$ dram.
Leptandra	$\frac{1}{2}$ ounce.
Solid extract nux vomica..	16 grains.
Oil caraway	2 drops.
Oil cinnamon	2 drops.
Oil wintergreen	$\frac{1}{2}$ dram.
Balsam Peru	$\frac{1}{2}$ dram.
Nutmeg	1 dram.
Indian turnip	15 grains.
Galangal	2 drams.
Madeira wine	1 pint.
Brandy	1 pint.

Grind the drugs moderately, add oills and balsam Peru to the brandy, let stand 48 hours, then add other ingredients; macerate 14 days and filter.

1194. Vogeler's Dentifrice Tincture.

Hager.

Tincture guaiac wood.....	50
Tincture cinnamon.....	15
Tincture cinchona.....	2
Tincture opium.....	2
Oil peppermint.....	3 drops.
Spirit of scurvy grass.....	30

Mix and filter.

1195. Volkmann's Antiseptic Liquid.

Thymol	1 dram.
Alcohol	12 fl. ounces.
Glycerine	2 fl. ounces.
Water	12 fl. ounces.

Dissolve the thymol in the alcohol, add the glycerine and lastly the water.

1196. Walker's Vegetable Vinegar Bitters.

Potter.

Socotrine aloes.....	2 drams.
Guaiacum resin.....	4 drams.
Mucilage of sassafras.....	1 ounce.
Vinegar	2 drams.
Water, q. s.	

Boil and make a decoction measuring 19 ounces, then strain and to the liquid add:

Sodium sulphate.....	1 ounce.
Acacia	2 drams.
Spirit of anise (10 per cent)	2 drams.
Alcohol	1 dram.

1197. Warner's Safe Liver and Kidney Cure.

New Idea.

Liverwort leaves (in coarse powder).....	1 ounce.
Potassium nitrate	320 grains.
Alcohol	2 ounces.
Glycerine	$1\frac{1}{2}$ ounces.
Essence wintergreen (1 in 16)	40 minims.
Hot water, q. s.	1 pint.

Make an infusion of the liverwort leaves and strain, in the strainings dissolve the nitre, and lastly add the alcohol containing the essence of wintergreen and the glycerine.

1198. Warner's Safe Liver and Kidney Cure.

Pharm. Post.

Extract lycopus virginica	20 parts.
Extract hepatica.....	15 parts.
Extract gaultheria.....	$\frac{1}{2}$ part.
Nitre	$2\frac{1}{2}$ parts.
Alcohol (90 per cent).....	80 parts.
Glycerine	20 parts.
Water	not given.

1199. Dr. Wentworth's Celebrated Red Bottle.

Med. Bull.

Alcohol	4 ounces.
Gum camphor	$\frac{1}{2}$ ounce.
Oil origanum	2 ounces.
Tincture opium	2 ounces.
Tincture aconite	$\frac{1}{2}$ ounce.

1200. Whaley's Dyspepsia Cure.

Kilner.

Nitric acid, diluted,	80 drops.
Fluid extract of conium....	2 drams.
Syrup of orange peel.....	2 drams.
Fluid extract of rhubarb..	$\frac{1}{2}$ ounce.
Tincture calumba	5 ounces.

1201. Wheeler's Elixir.

Solution of phosphate of iron	2 drams.
Solution of lactophosphate of lime.....	4 drams.
Muriatic acid, sufficient, about	1 dram.
Elixir cinchona from alkaloids	8 ounces.
Simple elixir	7 ounces.
Essence of bitter almonds	$\frac{1}{2}$ dram.
Carmine, sufficient to color.	

Mix and filter. If the preparation does not remain clear, add a few drops of muriatic acid.

The solution of phosphate of iron is made as follows:

Sulphate of iron	4 ounces.
Warm water	8 ounces.
Sugar	4 ounces.
Solution of phosphoric acid	4 ounces.

Dissolve the sulphate of iron in the warm water, add the solution of phosphoric acid and sugar, and filter.

The solution of phosphoric acid is made as follows:

Glacial phosphoric acid..	8 ounces.
Warm water	8 ounces.
Nitric acid	320 grains.

Dissolve the phosphoric acid in the water by allowing it to stand a few hours, stirring occasionally; add the nitric acid, and heat until no smell of it remains, and make up to 1 pint with water.

1202. Dr. Wheelock's Cough Mixture.

Sulphuric ether 3 fl. drams.
 Tincture of hyoscyamus.. 1 fl. dram.
 Syrup of wild cherry..... 1 fl. ounce.
 Syrup of tolu..... 1 fl. ounce.
 Water to make..... 4 fl. ounces.

1203. Peleg White Salve.

Resln 3 pounds.
 Beeswax ¼ pound.
 Mutton tallow ¼ pound.
 Castor oil..... 2 ounces.
 White pine gum..... ¼ pound.

1204. Whitworth's Liniment.

A. P. A.

Oil of thyme..... 4 drams.
 Tincture of myrrh..... 2 ounces.
 Tincture of camphor..... 2 drams.
 Compound spirit lavender. 2 ounces.
 Alcohol 8 ounces.

1205. Whitworth's Liniment.

Opium in powder..... 120 grains.
 White castile soap..... 60 grains.
 Camphor 1 troy ounce.
 Oil of orlganum..... 1 fl. dram.
 Oil of caraway..... 2 fl. drams.
 Alcohol 12 fl. drams.

Mlx, macerate with occasional agitation
 7 days, and filter.

1206. Whitworth's Liniment.

Stronger water of ammonia,
 Olive oil, of each..... 2 ounces.
 Tincture of opium..... 2 ounces.
 Oil of cinnamon,
 Oil of sassafras, of each.... 3 ounces.

1207. Wilkinson's Ointment.

A. P. A.

This ointment contains Beguin's spiritus
 sulphuris, prepared from washed sulphur
 1 part, and strong ammonia 6 to 8 parts,
 with sufficient sulphuretted hydrogen gas,
 until solution is effected. The ointment is
 a mixture of Beguin's liquor 1 part, pre-
 pared chalk 2 parts, and flowers of sulphur,
 lard and liquid tar, of each 25 parts.

1208. Williams' Sarsaparilla Syrup.

Parrish.

Compound syrup sarsapa-
 rilla 1 pint.
 Corrosive chloride of mer-
 cury 2 grains.
 Extract of conium..... 1 dram.

Triturate the corrosive chloride with a
 little alcohol and water till dissolved,
 then incorporate it and the extract of con-
 ium with the syrup.

1209. Erasmus Wilson's Hair Restorer.

D. Am. Ap. Ztg.

Oil almond 300.
 Ammonia 300.
 Spirit rosemary..... 2,500.
 Tincture cantharides..... 60.
 Oil lemon..... 35.

1210. Wistar's Cough Lozenges.

Kilner.

Extract licorice, powdered.. 5 ounces.
 Gum arabic, powdered..... 5 ounces.
 Sugar, powdered 5 ounces.
 Oil anise..... 30 drops.
 Sulphate morphia..... 12 grains.

Tincture tolu,

Water, of each, sufficient.

Dissolve the morphia in one ounce of
 water, and add the oil, with sufficient gum
 arabic to incorporate it. To this add one
 ounce of water, or sufficient; next add the
 powders and beat thoroughly into a mass
 of the proper consistence. These are to be
 divided into lozenges, weighing about six
 grains each, and then, after they are dry,
 are to be varnished with tincture tolu.

1211. Wither's Antizymotic Solution.

A. P. A.

Mercuric chloride..... 0.207 parts.
 Aluminum chloride..... 0.084 parts.
 Zinc chloride..... 0.048 parts.
 Potassium chloride..... 0.087 parts.
 Sodium chloride..... 0.788 parts.

1.214

Free hydrochloric acid, in

100 parts of the solution. 0.060 parts.

1212. Woronje Tinctura Anti-cholerica.

Hager.

Powdered saltpeter..... 1.0
 Ammonium chloride..... 1.0
 Pulverized black pepper..... 1.0
 Vinegar 150.0
 Crude petroleum..... 0.4
 Oil peppermint..... 4.0
 Nitro hydrochloric acid..... 0.4
 Best olive oil..... 2.0
 Alcohol 700.0

Digest for five hours, frequently agitating;
 after cooling, filter.

1213. Wright's Pearl Ointment.

Cooley.

Take of white precipitate, 8 ounces; Gou-
 lard's extract, 1 pint; rub them to a cream,
 and add the mixture to white wax, 7
 pounds, and olive oil, 10 pounds, previously
 melted together by a gentle heat; lastly,
 stir the whole until it is nearly cold.

1214. Wunderlich's Cholera Drops.

Hager.

Tincture opium.....	1.0
Wine ipecac.....	3.0
Ethereal tincture valerian.....	20.0
Oil peppermint.....	0.15

1215. Yankee Shaving Soap.

New Idea.

Take 3 pounds white soap, 1 pound castile soap, 1 quart rainwater, $\frac{1}{2}$ ox beef gall, and 2 fluid ounces oil turpentine. Dissolve the sliced soap in the water by heat, add the other ingredients, stir until cool. Then perfume with oil of bitter almonds or rose.

1216.**Zeodone.**

Pharm. Rec.

Calcium phosphate.....	2½ grains.
Iron phosphate.....	1 grain.
Potassium phosphate	1-5 grain.
Sodium phosphate.....	1-12 grain.

1217. Zollickoffer's Mixture.

Potassium iodide.....	2½ drams.
Powdered guaiac resin....	2½ drams.
Wine colchicum root.....	1½ ounces.
Cinnamon water,	
Syrup, of each enough to	
make	1 quart.

PART III.

Toilet Preparations.

TOOTH POWDERS.

1218. Acid Dentifrice.

(Wiener Zahnpulver.)

Cream tartar	20 grams.
Sugar of milk.....	20 grams.
Florentine orris root.....	2 grams.
Oil peppermint	3 drops.

1219. Acid Tooth Powders.

Venetian talc	4 ounces.
Cream of tartar	1 ounce.
Carminc	5 grains.
Essence of menthol	15 drops.

1220. Alkaline Tooth Powder.

Venetian talc	4 ounces.
Bicarbonate of sodium	1 dram.
Carminc	5 grains.
Essence of menthol	15 drops.

1221. Alkaline Tooth Powder.

Sodium bicarbonate.....	20 grams.
Talc.....	20 grams.
Armenian bole.....	20 grams.
Oil peppermint.....	10 drops.

1222. Antiseptic Dentifrice.

Resorcin, 2 grams; salol, 4 grams; orris (pulverized), 40 grams; carbonate of lime, 8 grams; carmine, No. 40, 30 centigrams.

1223. Jules Felix's Dentifrice.

Carbonate of lime (finest powdered)	1,000 parts.
Boric acid	50 parts.
Salicylic acid	50 parts.
Powdered dragon's blood	20 parts.
Essence spearmint	12 parts.

1224. Preservative Tooth Powder.

Era.

Carbonate lime precipitated	750 grains.
Carbonate magnesia	28 grains.
Borax, powdered	30 grains.
Almond soap, powdered....	250 grains.
Orris root, powdered.....	76 grains.
Thymol	1 grain.
Camphor	5 grains.
Oil peppermint.....	50 drops.
Oil cloves.....	25 drops.
Oil lemon.....	25 drops.
Oil eucalyptus.....	25 drops.
Creosote or carbolic acid...	10 drops.

Mix the powders thoroughly. Dissolve the thymol and camphor in enough alcohol and add; then add the rest of the ingredients and mix well together.

1225. Salol Tooth Powder.

Calcium carbonate, precipitated	750 parts.
Sugar of milk, powdered... ..	100 parts.
Orris root, powdered.....	100 parts.
Pumice, powdered	30 parts.
Salol, powdered	20 parts.
Oil peppermint	5 parts.
Oil geranium	1 part.
Oil* staranise	½ part.
Oil cloves	½ part.

1226. Salol Tooth Powder.

Salol	3 parts.
Powdered sepia	6 parts.
Prepared chalk	24 parts.
Carbonate of magnesia.....	16 parts.
Powdered sugar	6 parts.

1227. Tooth Powder With Salicylic Acid Red.

Sodium salicylate	5
Sugar of milk.....	20
Sodium bicarbonate	20
Orris root	20
Red saunders'	20
Oil peppermint	15 drops.

1228. Tooth Powder With Salicylic Acid White.

Sodium salicylate	5
Sugar milk	20
Sodium bicarbonate	20
Orris root	20
Talc, prepared	20
Oil peppermint	15 drops.

1230. Antiseptic Dentifrice.

Powdered orris	3 drams.
Powdered licorice root ...	2 drams.
Powdered castile soap ...	6 drams.
Precipitated chalk	1 ounce.
Acid boric	2 drams.
Acid benzoic	3 drams.
Magnesium carbonate, heavy, to make	4 ounces.
Oil eucalyptus	20 minims.
Oil rose virgin	5 minims.
Oil peppermint	5 minims.
Oil lemon	10 minims.

Mix in order and pass through fine sieve.
If color is desired, add 20 grains carmine.

1229. Thymol Dentifrice.

Precipitated chalk	15 ounces.
Soap, powdered	1 ounce.
Saccharin	10 grains.
Thymol	15 grains.
Camphor	30 grains.
Vanillin	5 grains.
Oil of rose	6 drops.

Rub the camphor and thymol together in a mortar, and warm gently so as to render the mixture liquid; then add the chalk in small portions at a time, reserving about 1 ounce; next add the other ingredients,

the perfumes being first separately rubbed with the remainder of the chalk.

1231. Naphthol Dentifrice.

Precipitated chalk	7½ ounces.
Powdered orris root	7½ ounces.
Beta naphthol.....	3 drams.
Powdered soap	2½ ounces.
Powdered sugar	1½ ounces.
Carmine	30 grains.
Oil lavender	1 fl. dram.
Oil lemon	1 fl. dram.
Oil bergamot	1 fl. dram.
Oil gaultheria	30 minims.
Oil rose	10 minims.

Mix and sift.

1232. Aromatic Dentifrice.

Magnesium carbonate, heavy	7 ounces.
Precipitated chalk	24 ounces.
Powdered orris	4 ounces.
Powdered castile soap ...	4 ounces.
Carmine	20 grains.
Oil cloves, Eng.....	2 drams.
Oil cinnamon, true.....	1 dram.
Oil origanum	50 minims.
Oil rose geranium	1 dram.
Oil rose virgin	1 dram.
Essence musk	1 dram.

Mix and pass through sieve several times.

1233. Asiatic Dentifrice.

Prepared corals	120 parts.
Venetian red	9 parts.
Ochre	15 parts.
Pumice stone	15 parts.
Musk	5-100 part.

Powder and mix.

1234. Asiatic Dentifrice.

Bole	3 parts.
Chalk	2 parts.
Ochre	1 part.
Pumice stone	1 part.
Musk	trace.

1235. Astringent Tooth Powder.

Cream tartar	20.0.
Florentine orris root	20.0.
Exsiccated alum	2.0.
Cochineal	1.0.
Oil rose	2 drops.

1236. Malhe's Tooth Powder.

Sugar of milk	1,000 parts.
Lake	10 parts.
Tannin	15 parts.
Oil of mint,	
Oil of anise,	
Oil of neroli, of each suffi-	
cient to flavor to taste.	

Rub the tannin and lake well together, and gradually add the sugar of milk, previously powdered and sifted, and lastly the essential oils.

1237. Rhatany Tooth Powder.

Rhatany root	2 ounces.
Cuttlefish bone	4 ounces.
Prepared chalk	8 ounces.
Borax	1 dram.

1238. Rhatany Dentifrice.

Powdered orris.....	6 ounces.
Powdered cuttle bone....	6 ounces.
Powdered chalk precipi- tate	24 ounces.
Powdered krameria.....	9 ounces.
Carminc	1½ drams.
Borax	3 drams.
Antimonial powder.....	6 drams.
Oil rose virgin.....	24 drops.
Oil neroli.....	16 drops.
Oil cedrat.....	8 drops.
Oil cinnamon.....	8 drops.
Oil cloves.....	8 drops.
Oil lavender, Eng.....	4 drops.
Oil pimenta.....	4 drops.
Tincture myrrh.....	6 drams.
Extract violet.....	6 drams.
Magnesium carbonate, heavy	6 ounces.
Mix and pass through sieve several times.	

1239. Tannin Dentifrice.

Sugar of milk.....	32 ounces.
Carminc	150 grains.
Tannin	½ ounce.
Oil of peppermint.....	10 drams.
Oil of anise.....	20 drams.
Oil of neroli.....	10 drams.
Triturate the carminc with the tannin, add the sugar of milk gradually, and finally the oils.	

1240. Astringent Tooth Powder.

Precipitated chalk.....	8 ounces.
Powdered orris root.....	½ ounce.
Powdered myrrh.....	½ ounce.
Bicarbonate of soda.....	1 ounce.
Powdered soap.....	½ ounce.
Oil peppermint....	15 minims.
Oil lemon.....	1 fl. dram.
Oil coriander.....	15 minims.
Mix and sift.	

1241. Betton's Dentifrice.

Powdered cuttlefish bone	4 pounds.
Powdered orris root.....	4 pounds.
Prepared chalk.....	1 pound.
Musk	8 grains.
Oil of rose.....	48 drops.
Oil of lavender (Mitch- am)	48 drops.
Carminc, No. 40.....	2 drams.
Ammonia water.....	5 fl. drams.
Water	6 fl. ounces.
Rub the carminc with the ammonia,	

diluted with water, and with this solution imbue the prepared chalk and powdered cuttlefish bone. Allow the mixture to become dry, add the orris root, perfumed with the essential oils, mix, and sift.

1242. Black Tooth Powder.

Wood charcoal, in fine pow- der	28 parts.
Oyster shell.....	4 parts.
Orris root.....	4 parts.
Catechu	2 parts.
Cinnamon	2 parts.
Myrrh	1 part.

1243. Black Tooth Powder.

Wood charcoal, in fine pow- der....	4 parts.
Cinchona bark.....	1 part.
Oil of cloves, sufficient quantity.	

1244. Red Tooth Powder.

Digest 4 to 5 drams of powdered cochineal with a boiling hot solution of 90 grains of pure carbonate of potassium in 2 fluid ounces of water; after several days, separate the liquid from the insoluble matter by pressing, triturate the mixture with a mixture of 16 ounces of powdered oyster shells, 8 ounces of powdered cuttlefish bone, 3 ounces of powdered orris root, and 150 grains of burnt alum, and finally scent it with equal parts of oil of cloves and of bergamot. Or scent it with oil of peppermint, of which about 160 minims dissolved in 2 fluid ounces of alcohol, may be incorporated with the powder.

1245. Red Tooth Powder.

Cinchona, in fine powder....	4 parts.
Sandal wood, in fine powder..	8 parts.
Alum	1 part.
Oil of bergamot and oil of cloves, equal parts, sufficient quantity.	

1246. Wild Cherry Dentifrice.

Precipitated chalk.....	4 pounds.
Powdered orris.....	4 ounces.
Powdered soap.....	1 ounce.
Fluid extract wild cherry.	8 ounces.
Infusion red rose leaves...	12 ounces.
Glycerine, 2 parts,	
Water, 1 part.....	12 ounces.
Oil wintergreen.....	½ dram.
Essential oil of almond...	8 drops.

1247. Willow Bark Dentifrice.

Powdered willow bark,	
Powdered charcoal, each.	½ ounce.
Extract of myrrh.....	2 drams.
Balsam of Peru.....	½ scruple.
Oil of cinnamon.....	3 drops.
Triturate well together.	

1248. Camphorated Chalk.

Precipitated chalk..... $\frac{1}{2}$ pound.
 Powdered orris root..... $\frac{1}{4}$ pound.
 Powdered gum camphor... $\frac{1}{8}$ pound.

Reduce the camphor to a powder by rubbing it in a mortar with a few drops of alcohol; then sift the whole well together.

1249. Camphorated Saponaceous Dentifrice.

Precipitated chalk..... 12 parts.
 Powdered castile soap..... 8 parts.
 Magneslum carbonate..... 4 parts.
 Powdered camphor..... 1 part.
 Oil of peppermint..... $\frac{1}{8}$ part.

(This powder is similar to Brown's Camphorated Saponaceous Dentifrice.)

1250. Cartwright's Tooth Powder.

Prepared chalk..... 30 parts.
 Orris root..... 20 parts.
 Castile soap..... 2 parts.
 Powder and mix.

1251. Citroleine Dentifrice.

Precipitated chalk..... 1 pound.
 Powdered sugar..... 2 ounces.
 Powdered orris..... 4 ounces.
 Cuttle fish bone..... 2 ounces.
 Soda bicarbonate..... 2 ounces.
 Oil lemon..... 2 drams.

First tint the precipitated chalk with a concentrated tincture of saffron, and then spread on paper to dry. Then take the soft portion of the fish bone which can be scraped off with a knife, place in a mortar with the sugar, rub well down to a fine powder. To this gradually add the powdered orris root, bicarbonate of soda and oil of lemon. Mix thoroughly, then gradually incorporate with the chalk by working in a mortar or mixer and sifter.

1252. Columbian Dentifrice.

Carbonate calcium, precipitated 8 ounces.
 Castile soap, powdered... 1 ounce.
 Cuttle fish bone, powdered,
 Orris root, powdered,
 of each 4 drams.
 Oil wintergreen..... $\frac{1}{2}$ fl. dram.
 Prepared coloring..... $\frac{1}{2}$ ounce.

Mix the prepared coloring with the precipitated chalk by trituration, sift through an ordinary sieve and set in a warm place to dry. Mix the soap, fish bone and orris root; to this add the oil of wintergreen and lastly the colored chalk. Run through a fine bolting cloth.

1253. Crown Tooth Powder.
Era.

Powdered cuttlebone..... 15 parts.
 Powdered borax..... 5 parts.
 Powdered castile soap..... 5 parts.
 Powdered sugar..... 15 parts.
 Powdered orris root (Flor.) 10 parts.
 Precipitated carbonate lime. 50 parts.
 Oil of wintergreen..... 3 drams.

Rub up the oil of wintergreen with the precipitated carbonate of lime; when thoroughly mixed, add the other ingredients, mix well and sift.

1254. Peerless Record Dentifrice.

Carbonate calcium
 precipitated 750 grains.
 Carbonate magnesia..... 28 grains.
 Borate soda, powdered... 30 grains.
 Almond soda, powdered... 250 grains.
 Orris root, powdered..... 76 grains.
 Thymol, powdered..... 1 grain.
 Camphor 5 grains.
 Oil peppermint..... 50 drops.
 Oil cloves..... 25 drops.
 Oil lemon..... 25 drops.
 Creosote 10 drops.
 Oil eucalyptus..... 25 drops.

Dissolve thymol and camphor in sufficient alcohol to effect solution and add to the previously well-mixed powders, then add the rest of the ingredients and mix well together.

1255. Charcoal Dentifrice.

Powdered myrrh..... $\frac{1}{2}$ ounce.
 Powdered benzoïn..... $\frac{1}{2}$ ounce.
 Powdered soap..... 1 ounce.
 Willow charcoal, powdered 2 ounces.
 Carbolic acid..... 1 dram.
 Precipitated chalk..... 4 ounces.
 Oil wintergreen..... 30 drops.
 Oil peppermint..... 60 drops.

1256. Dentenamel.
Era.

Saccharin 24 grains.
 Sodium bicarbonate..... 24 grains.
 Chalk precipitated..... 12 ounces.
 Magnesium carbonate.... 3 drams.
 Soap, powdered..... 9 drams.
 Orris 9 drams.
 Thymol 24 grains.
 Carmine 24 grains.
 Oil geranium..... 24 minims.
 Oil gaultheria..... 12 minims.

Rub the thymol and carmine with the carbonate of magnesia and add the essential oils; then the chalk and the orris. Lastly the soap. Pass through a sieve and add the saccharine and bicarbonate of soda, and again pass through a fine sieve.

1257. Diamond Tooth Powder.

Precipitated chalk..... 3 pounds.
 Powdered myrrh..... 4 ounces.
 Powdered sugar..... 1 pound.
 Powdered white castile
 soap 8 ounces.
 Oil of wintergreen, sufficient.

1258. Florentine Dentifrice.

Prepared oyster shells..... 14 drams.
 Orris 6 drams.
 Cream of tartar..... 3 drams.
 Lake to color.

1259. Talc Dentifrice.

Talc 2 ounces.
 Cream tartar..... 72 grains.
 Burnt alum..... 78 grains.
 Cochineal 156 grains.
 Essence of mint..... 20 drops.

1260. Deschamp's Alkaline Tooth Powder.

Sugar 30 parts.
 Wood charcoal..... 30 parts.
 Peruvian bark..... 15 parts.
 Cream of tartar..... 5 parts.
 Cinnamon 1.5 part.
 Powder as fine as possible and mix.

1261. Sulphur Dentifrice.

Washed sulphur..... 1 pound.
 Precipitated chalk..... 3 pounds.
 Precipitated phosphate
 calcium 1 pound.
 Powdered soap..... 10 ounces.
 Mix thoroughly, and flavor with a suffi-
 cient quantity of the following mixture:
 Oil wintergreen..... 45 minims.
 Oil peppermint..... 45 minims.
 Oil cinnamon..... 30 minims.

A sufficient amount of the mixed oils
 should be dissolved in 4 times the quantity
 of petroleum ether and the whole added to
 the precipitated chalk and thoroughly in-
 corporated, and sift all powder dentifrices
 through a No. 60 sieve.

1262. Victoria Dentifrice.

Precipitated chalk..... 8 ounces.
 Powdered cuttle bone..... 6 ounces.
 Powdered soap..... ½ ounce.
 Borate of soda..... ½ ounce.
 Powdered orris root..... ½ ounce.
 Powdered sugar..... 2 ounces.
 Carbolic acid (95 per cent.) 10 minims.
 Oil gaultheria..... 1 fl. dram.
 Solution of carmine, N. F.. 1 fl. dram.
 Water 3 fl. drams.

Add the water to the carmine solution
 and triturate in divided portions with the
 chalk; set aside in a warm place to dry

and add the cuttle fish bone; then incor-
 porate the soap, borax, orris root and
 sugar; mix well, add flavoring, and lastly
 sift.

1263. Peruva Dentifrice.

Era.

Precipitated chalk..... 1 ounce.
 Powdered cuttle bone..... ½ ounce.
 Red cinchona bark..... 1 dram.
 White castile soap..... 1 dram.
 Powdered cassia..... ¼ dram.
 Powdered camphor..... ¼ dram.
 Oil lavender flowers..... 5 minims.
 Oil sassafras..... 5 minims.

1264. Quinine Toothpowder.

Precipitated carbonate
 of calcium..... 29 av. ounces.
 Orris root..... 3½ av. ounces.
 Sugar of milk..... 3½ av. ounces.
 Saccharin 4 grains.
 Pumice stone..... 390 grains.
 Carbonate of magnesia. 390 grains.
 Tannic acid..... 300 grains.
 Hydrochlorate of qui-
 nine 80 drops.
 Oil of rose..... 16 drops.
 Oil of peppermint..... 80 drops.
 Oil of ylang ylang..... 5 drops.
 Oil of almonds, essen-
 tial 5 drops.

1265. Peruvian Bark Dentifrice Powder.

Powdered Peruvian bark. 1½ ounces.
 Powdered saunders..... ½ ounce.
 Oil of bergamot..... 20 drops.
 Oil of cloves..... 20 drops.

1266. Peruvian Bark Dentifrice Powder.

Powdered Peruvian bark. 3 ounces.
 Powdered cream tartar... ½ ounce.
 Powdered sage leaves..... ½ ounce.
 Powdered myrrh..... ½ ounce.
 Powdered catechu..... 6 drams.
 Oil of cloves..... 16 drops.

1267. Peruvian Bark Dentifrice Powder.

Powdered Peruvian bark. 1 ounce.
 Powdered orris root..... ½ ounce.
 Powdered sage leaves..... ½ ounce.
 Powdered myrrh..... ½ ounce.

1268. Peruvian Bark Dentifrice Powder.

Powdered Peruvian bark. 2 ounces.
 Powdered chloride of am-
 monium ½ ounce.
 Powdered orris root..... 1 ounce.
 Powdered catechu..... 6 drams.
 Powdered myrrh..... 6 drams.
 Oil of cloves..... 20 drops.

1269. Quinine Tooth Powder.

Sulphate of quinine..... 30 grains.
 Powdered starch..... $\frac{1}{4}$ pound.
 Powdered orris-root..... $\frac{1}{4}$ pound.
 Precipitated chalk..... $\frac{1}{2}$ pound.
 Triturate thoroughly, and sift.

1270. Regnaud's Dentifrice.

Calcined magnesia..... $\frac{1}{2}$ ounce.
 Sulphate of quinine..... 8 grains.
 Carmine (or cochineal), q. s.
 Oil of peppermint 3 drops.

1271. Saunders' Dentifrice.

Prepared chalk 2 ounces.
 Cuttlefish bone 1 ounce.
 Orris 1 ounce.
 Myrrh $\frac{1}{2}$ ounce.
 Sulphate of quinine 10 grains.

1272. Jamet's Dentifrice.

Orris 16 ounces.
 Pumice stone 8 ounces.
 Magnesia 4 ounces.
 Cuttle-fish bone 8 ounces.
 Sulphate of quinine 4 ounces.
 Cascarilla 1 ounce.
 Sugar of milk 16 ounces.
 Oil of mint 1 ounce.
 Oil of cinnamon 2 drams.
 Oil of neroli 1 dram.
 Essence of ambergris..... 1 dram.

1273. Brown Tooth Powder.

Powdered cinchona, pale... 2 ounces.
 Powdered myrrh 1 ounce.
 Precipitated chalk (English) 1 pound.
 Bole Armenian..... 2 ounces.
 Oil of wintergreen 20 drops.
 Triturate thoroughly, then sift through a fine sieve.

1274. Dr. Rush's Dentifrice.

Cinchona, powdered..... 4 parts.
 Charcoal, powdered..... 4 parts.
 Myrrh, powdered 2 parts.
 Bitartrate potassium 1 part.

1275. Pumice Stone Tooth Powder.

Pumice 10.
 Prepared oyster shell 10.
 Sodium bicarbonate 10.
 Orris root 10.
 Sugar of milk 10.
 Mix, then add:
 Vanillin 0.1

1277. Improved Tooth Powder.

Boric acid 4 ounces.
 Resin guaiac 2 ounces.
 Carbonate of calcium 6 ounces.
 Carbonate of magnesium... 30 ounces.
 Otto of roses 3 drops.
 Potassium chlorate 6 ounces.
 Powder the chlorate separately and carefully, and add after the other ingredients are mixed.

1276. Imperial Tooth Powder.

Era Prize.

Precipitated chalk 8 ounces.
 Powdered castile soap..... 1 ounce.
 Powdered cuttle fish bone... $\frac{1}{2}$ ounce.
 Powdered orris root..... $\frac{1}{2}$ ounce.
 Oil wintergreen $\frac{1}{2}$ fl. dram.
 Prepared coloring, q. s. to suit.

Prepared coloring:

Carmine, No. 40 $\frac{1}{2}$ ounce.
 Water 8 ounces.
 Aqua ammonia 8 ounces.

Triturate the carmine with the ammonia, add the water and filter.

To the chalk add $\frac{1}{2}$ ounce of the coloring by trituration, sift through an ordinary sieve and set in a warm place until thoroughly dry. Mix the soap, fish bone and orris root; to this add the oil of wintergreen, then add the colored chalk. Run all through bolting cloth. (If pink color is not deep enough add more prepared coloring before sifting.)

1278. Lavender Tooth Powder.

Crimson lake 1 dram.
 Chinese blue (or Turnbull's blue) 1 scruple.

Mix, and add:

Bicarbonate of soda $\frac{1}{2}$ ounce.
 Cuttle fish bone 2 ounces.
 Precipitated chalk 6 ounces.
 Oil of lavender 8 drops.

1279. O. K. Tooth Powder.

Era Second Prize.

Precipitated chalk 4 ounces.
 Powdered myrrh $\frac{1}{4}$ ounce.
 Powdered castile soap, white... $\frac{1}{2}$ ounce.
 Powdered orris root $\frac{1}{2}$ ounce.
 Oil peppermint.

1280. Saccharin Tooth Powder.

Saccharin 3 grams.
 Pulverized calamus root... 4 grams.
 Precipitated chalk..... 53 grams.
 Essence of peppermint..... 20 drops.
 Mix. Make an impalpable powder.

1281. Orris Tooth Powder.

Powdered orris root..... 4 ounces.
 Powdered sugar,
 Powdered soap,
 Powdered rose pink, of each 1 ounce.
 Powdered cuttlebone..... $\frac{1}{2}$ ounce.
 Precipitated chalk..... 20 ounces.
 Oil wintergreen,
 Oil cloves,
 Extract musk, of each.... 30 drops.

Incorporate the flavors with the precipitated chalk; add the other powders and mix thoroughly, then sift.

1282. Saccharin Tooth Powder.

Carmine 20 centigrams.
 Saccharin 2 centigrams.
 Magnesium carbonate... 10 grams.
 Cuttle-fish bone..... 20 grams.
 Reduce to fine powder and mix thoroughly.

1283. Zieter's Tooth Powder.

From finely powdered calcined hartshorn and cuttle fish bone, of each 6 ounces; calamus aromaticus, cassia and pellitory of Spain, of each 1 ounce; essence of vanilla, 1 dram; essence of ambergris, 10 or 12 drops.

1284. Pink Tooth Powder.

Powdered cuttlefish..... $\frac{1}{2}$ pound.
 Powdered orris root..... $\frac{1}{2}$ pound.
 Precipitated chalk..... 3 pounds.
 Rose pink (English)..... $\frac{1}{2}$ pound.
 Mix by sifting.

1285. Plesse's Cuttlefish Powder.

Powdered cuttlefish..... $\frac{1}{2}$ pound.
 Precipitated carbonate of lime 1 pound.
 Powdered orris root..... $\frac{1}{2}$ pound.
 Oil of lemon..... 1 ounce.
 Oil of neroli..... $\frac{1}{2}$ ounce.
 Carmine $\frac{1}{2}$ dram.
 Ammonia water 2 fl. drams.
 Water $1\frac{1}{2}$ fl. ounces.

1286. Pearl Tooth Powder.

Precipitated chalk..... 4 ounces.
 Powdered French chalk.. 8 ounces.
 Powdered white soap... 4 ounces.
 Powdered sugar..... 4 ounces.
 Oil of wintergreen..... 60 minims.
 Oil of cloves..... 15 minims.
 Oil of rose..... 15 minims.
 Tint with a few grains of carmine if desired.

1287. Rose Dentifrice.

Prepared chalk..... $3\frac{1}{2}$ pounds av.
 Sugar of milk..... $1\frac{1}{4}$ pounds av.
 Best powdered orris root $\frac{1}{4}$ pound av.
 Carmine no. 40.....40 grains.
 Oil rose.....20 min. or 40 drops.
 Rub the chalk, orris root and $\frac{3}{4}$ pound of sugar of milk together in a capacious mortar and pass the mixture through a No. 80 sieve. Then rub up the carmine in the mortar and gradually add to it whilst rubbing the remaining sugar of milk. To this mixture add the oil of rose and after rubbing all well together add to it about $\frac{1}{8}$ pound of the sifted mixture, stir this well together and also pass it through the sieve. Mix.

1288. Rose Tooth Powder.

Powdered white sugar... 16 ounces.
 Prepared chalk..... 16 ounces.
 Powdered magnesium carbonate 32 ounces.
 Powdered cuttle bone... 8 ounces.
 Potassium bitartrate.... 10 ounces.
 Rose pink..... 10 ounces.
 Mix thoroughly and add
 Oil peppermint..... 4 drams.
 Oil cassia..... $2\frac{1}{2}$ drams.
 Tincture ambergris..... 2 drams.

1289. Winckler's Roseate Dentifrice.

Cuttlefish bone, 1 part; conserve of roses, 3 parts; white otto of roses, 2 drops to the ounce.

1290. Winckler's Roseate Dentifrice.

Chalk, 8 ounces; myrrh and rhatany root, of each 2 ounces; orris root, 1 ounce; honey of roses, sufficient quantity to mix.

1291. Saponaceous Tooth Powder.

Prepared chalk..... 4 ounces.
 Carbonate of magnesia, heavy 4 ounces.
 Castile soap, powdered... 1 ounce.
 Oil of rose..... 6 drops.

1292. Rose Tooth Powder.

Prepared chalk..... 1 pound.
 Precipitated chalk..... 1 pound.
 Oil of rose..... $\frac{1}{2}$ dram.
 French carmine..... 1 dram.

1293. Aromatic Tooth Powder.

Precipitated chalk..... 16 ounces.
 Prepared chalk..... 8 ounces.
 Orris root..... 1 ounce.
 Essence of vanilla..... $\frac{1}{2}$ ounce.
 Strong tincture of cinnamon $\frac{1}{2}$ ounce.
 Simple tincture of benzoin. $\frac{1}{2}$ ounce.
 Oil of rose..... 16 drops.

1295. Saponaceous Dentifrice (Camphorated).

Precipitated chalk..... 20 ounces.
 Powdered soap..... 2 ounces.
 Powdered camphor..... 2 ounces.
 Powdered sugar 2 ounces.
 Oil wintergreen..... 2 fl. drams.
 Oil sassafras..... 1 fl. dram.
 Oil cloves..... 30 drops.
 Extract musk..... 30 drops.
 Extract vanilla..... 30 drops.
 Reduce the camphor to a fine powder with the aid of alcohol; add the remaining powders, mix well and incorporate the oils and extracts, then sift.

**1294. Marshall's or Hudson's
Dentifrice.**

Powdered chalk..... 3 pounds.
 Powdered myrrh..... 1 pound.
 Powdered orris root..... 1 pound.
 Rose pink..... 1 ounce.

Thoroughly powder the ingredients and mix them through a fine sieve.

1296. Violet Tooth Powder.

Precipitated chalk..... 6 ounces.
 Powdered cuttle bone..... 3 ounces.
 Powdered rose pink..... 2½ ounces.
 Powdered orris root..... 1½ ounces.
 Extract orris (perfume)... ½ fl. dram.
 Indigo, in fine powder, enough to color.

Mix and sift.

1297. Violet Tooth Powder.

Orris root powder..... 3 pounds.
 Carbonate of magnesium. 1 pound.
 Sugar of milk..... 1½ pounds.
 Best soap powder..... 5¼ ounces.
 Portugal oil..... 1 ounce.
 Peppermint oil..... 1 ounce.
 Rhatany tincture..... 3½ ounces.

Thoroughly mix the powdered and colored ingredients, add the thymol dissolved in the mixture of the volatile oils, arnica tincture and glycerine, rub and uniformly mix the whole with the hands, so that no specks of coloring matter and perfume are perceptible, and then again pass through a fine sieve.

**1298. Winnipeg Special Tooth
Powder.**

Precipitated chalk 16 ounces.
 Powdered pumice 2 ounces.
 Powdered soap 6 ounces.
 Powdered starch 6 ounces.
 Powdered sugar 6 ounces.
 Oil neroli 40 drops.
 Oil peppermint 50 drops.
 Oil gaultheria 30 drops.

1299. White's Tooth Powder.

Precipitated chalk ½ ounce.
 Bitartrate potasslum 1½ ounces.
 Powdered orris root 6 ounces.
 Powdered pumice 1 ounce.
 Powdered borax ½ ounce.
 Powdered gum myrrh 2 ounces.
 Powdered saltpeter 2 ounces.
 Powdered pyrethrum 2 ounces.
 Powdered drop lake ½ ounce.

Mix thoroughly and add—

Oil verbenia 16 drops.
 Oil cloves 16 drops.
 Oil lavender flowers..... 16 drops.
 Oil neroli 26 drops.
 Oil lemon 32 drops.

1300. Red Color for Tooth Powder.

Boil from 100 to 150 grams of Brazil wood, and to the decoction add 15 to 20 grams alum. The color will be sufficient for 1 kilogram of tooth powder.

1301. To Clean the Teeth.

Rub black or spotted teeth with cuttlefish bone made into a stiff mass by mixture with a 4 per cent solution of hydrogen peroxide. After using the mouth should be rinsed with water. In this way the teeth may be whitened in a few minutes, and it is said that the operation will not injure the enamel.

TOOTH PASTES.

**1302. Floral Dentine.
Era.**

Powdered cuttlefish bone.. 15 drams.
 Powdered prepared chalk. 5 ounces.
 Powdered orris florentine. 20 drams.
 Carmine 5 grains.
 Oil lemon 70 drops.
 Oil rose geranium 40 drops.
 Honey, strained 10 drams.
 Syrup 5 ounces.

Triturate the solid ingredients to a fine powder, add the oils, then the syrup and honey, and thoroughly mix.

**1303. Dentalba.
Era Prize.**

Precipitated chalk 12 ounces.
 Prepared chalk 6 ounces.
 Powdered orris 6 drams.
 Essence vanilla 3 drams.
 Tincture coumarin 6 drams.
 Tincture benzoin 3 drams.
 Ammonia (stronger) 1 dram.
 Carmine 1 dram.
 Otto rose 12 minims.
 Oil cloves 12 minims.
 Glycerine 8 ozs. or q. s.

1304. Antiseptic Dental Cream.

Precipitated chalk 5 drams.
 Powdered white castile
 soap 1 dram.
 Salicylate of soda 30 grains.
 Oil rose geranium 4 drops.
 Oil wintergreen 3 drops.
 Solution of carmine 2 drops.
 Glycerine 4, } q. s.
 Water 1..... }

Triturate the powders, add the oils and continue trituration until well mixed; then make into a paste of the desired consistency with glycerine and water mixed in the above proportion; add the solution of carmine and rub all together until a smooth, creamy paste results.

1305. Astringent Tooth Paste.

Precipitated chalk 2 ounces.
 Powdered myrrh ½ ounce.
 Powdered rhatany ½ ounce.
 Powdered cuttlefish bone. ½ ounce.
 Powdered orris 3 drams.
 Honey 3 ounces.

Beat into a paste after the addition of some suitable flavor.

1306. Thymol Tooth Paste.

Carbonate of magnesium 4 pounds.
 Sugar of milk 2 pounds.
 Pulverized gum arabic... 3½ ounces.
 Soap powder 3½ ounces.
 Carmine 2¾ drams.
 Alizarin 6¾ drams.
 Sugar 10½ ounces.

Dissolve in distilled water 1¾ quarts peppermint oil, 1¼ ounces; white thyme oil, 2½ ounces; crystallized thymol, 1¼ ounces; arnica tincture, 7 ounces. The thyme oil, peppermint oil and arnica tincture are brought into a bottle and the thymol is dissolved in the mixture. By previously converting the thymol to a coarse powder, solution takes place quite rapidly.

1307. Aluminum Tooth Paste.

Precipitated hydrate of aluminum 6 ounces.
 Precipitated chalk 9 ounces.
 Magnesia 1 ounce.
 Oil lavender ½ ounce.
 Oil sassafras ½ ounce.
 Glycerine, sufficient to form a paste.

1308. Antiseptic Tooth Paste.

Precipitated chalk 8 ounces.
 Powdered soap 4 ounces.
 Powdered sugar 4 ounces.
 Powdered acacia ½ ounce.
 Powdered myrrh ½ ounce.
 Carbolic acid 2 drams.
 Menthol 20 grains.
 Powdered borate of soda.. 1 ounce.
 Glycerine enough to make a paste.

1309. Carbolic Tooth Paste.

Melt 1 pound best honey; skim carefully and add 4 ounces glycerine. Then incorporate thoroughly in a mortar sufficient of the following powder, perfectly levigated and mixed, to bring the paste to the desired consistence:

Precipitated chalk 1 pound.
 Orris powder 4 ounces.
 Carmine 1 dram.
 Aromatize with carbolic acid, ½ dram;

oil of wintergreen, 20 drops; oil of cinnamon, 5 drops; in alcohol, ½ ounce.

1310. Camphorated Tooth Paste.

Precipitated chalk 12 ounces.
 Powdered myrrh ½ ounce.
 Powdered camphor ½ ounce.
 Powdered soap 1½ ounces.
 Bicarbonate soda 1½ ounces.
 Oil lavender 10 drops.
 Oil lemon 10 drops.
 Oil bergamot 10 drops.
 Oil rose 10 drops.
 Glycerine, enough to make a paste.

1311. Charcoal Tooth Paste.

Powdered charcoal 1 ounce.
 Powdered cinchona 1 ounce.
 Vanilla sugar 1 ounce.
 Oil cinnamon 10 drops.
 Honey 1 ounce.
 Mix and form a paste.

1312. Charcoal Tooth Paste.

Powdered charcoal 16 ounces.
 Powdered orris 16 ounces.
 Precipitated chalk 32 ounces.
 Glycerine, to proper consistence.

1313. Cherry Tooth Paste.

Solution cochineal (see below) 16 ounces.
 Honey 4 ounces.
 Prepared chalk..... 35 ounces.
 Powdered orris root..... 1¾ ounces.
 Powdered acacia..... 6 drams.

The solution of cochineal used in the above formula is made as follows:

Powdered cochineal..... 1 ounce.
 Potassium carbonate..... 1 ounce.
 Water 20 ounces.

Boll 10 minutes and add cream of tartar 1 ounce; alum, ½ ounce; make 16 ounces.

1314. Cherry Tooth Paste.

Powdered orris root..... 2 ounces.
 Powdered myrrh..... ½ ounce.
 Powdered pumice stone (levigated) 2 ounces.
 Honey 4 ounces.
 Oil clove ½ dram.
 Essence lemon..... 1½ drams.
 Otto rose..... 8 drops.

Solution carmine to color.

Mix the powdered orris, myrrh and pumice together intimately, and add the solution of carmine; then add the essential oils, care being taken to have the ingredients uniformly mixed. Now add the honey and form a paste.

1315. Coca Tooth Paste.

Powdered white soap..... 1 ounce.
 French chalk..... 3 ounces.
 Cuttle fish bone..... $\frac{1}{2}$ ounce.
 Carmine $\frac{1}{2}$ dram.
 Tincture of coca leaves. $\frac{1}{2}$ ounce.
 Oil of peppermint..... 20 minims.
 Oil of cascarilla..... 5 minims.
 Oil of linaloes..... 15 minims.
 Glycerine A sufficiency.
 Make into a paste.

1316. Eucalyptus Tooth Paste.

Precipitated chalk..... 3 ounces.
 French chalk..... 2 ounces.
 Powdered white soap... $1\frac{1}{2}$ ounces.
 Starch $1\frac{1}{2}$ ounces.
 Carmine 15 grains.
 Oil of peppermint..... 15 minims.
 Oil of rose geranium... 15 minims.
 Oil of eucalyptus..... $\frac{1}{2}$ dram.
 Oil of cloves..... 6 minims.
 Oil of anise..... 6 minims.
 Glycerine and spirit of each a sufficiency
 to make a paste.

1317. Dr. Harlan's Tooth Paste.

Precipitated chalk..... 2 ounces.
 Powdered orris..... 2 ounces.
 Powdered castile soap
 (white) $\frac{1}{2}$ ounce.
 Powdered cuttle-fish bone 2 drams.
 Powdered myrrh..... 1 dram.
 Powdered white sugar.... 1 dram.
 Powdered borax..... 1 ounce.
 Carmine 10 grains.
 Oil of wintergreen..... 1 dram.
 Glycerine 1 ounce.
 Honey 1 ounce.
 Mix well after dissolving the carmine in
 a little water, alkalized with a little
 borax.

1318. Hager's Tooth Paste.

Sodium salicylate..... $2\frac{3}{4}$ drams.
 Sodium bicarbonate..... 30 grains.
 Powdered talc..... $1\frac{1}{2}$ ounces.
 Powdered castile soap... $1\frac{1}{2}$ ounces.
 Carmine $4\frac{1}{2}$ grains.
 Peppermint 20 drops.
 Glycerine $5\frac{1}{2}$ drams.
 Diluted alcohol..... $5\frac{1}{4}$ drams.
 Make into a paste.

1319. Kalodont.

Precipitated carbonate of lime.
 Neutral soap.
 Glycerine. Of each equal parts.
 Mix carefully and make into a homo-
 geneous paste. Color with carmine and
 perfume with oil of peppermint. Place into

a porcelain vessel, melt over the water
 bath and let cool, with constant stirring.
 Put into metallic tubes. If not sufficiently
 fluid, remelt and add a little water.

1320. Tooth Paste for Collapsible Tubes.

Precipitated chalk..... 8 ounces.
 Powdered cuttle bone..... 2 ounces.
 Powdered castile soap.... 2 ounces.
 Carmine No. 40, in fine
 powder 1 dram.
 Oil of cloves..... 20 minims.
 Oil of nutmeg..... 20 minims.
 Oil bitter almond..... 10 minims.
 Oil rose..... 5 minims.
 Alcohol, glycerine, honey,
 or syrup and water,
 each 5 minims.

Beat the soap first with the water, and
 warm until softened, then add the remain-
 ing liquids and mix well together. In this
 incorporate the solid ingredients and put
 up in the tubes.

1321. Good Tooth Paste.

Calcium carbonate pre-
 cipitated $1\frac{1}{2}$ ounce.
 Sugar 1 ounce.
 Potassium bitartrate... $\frac{1}{2}$ dram.
 Make into a paste with
 Glycerine 2 fl. ounces.
 Rose water..... 2 fl. ounces.
 And add this to the following solution,
 effected by heat:
 Castile soap, white (or
 good glycerine soap)... 4 av. ounces.
 Alcohol 1 fl. ounce.
 Rose water..... $\frac{1}{2}$ fl. ounce.
 And finally, after cooling, add:
 Oil peppermint..... 60 drops.
 Carmine dissolved in
 ammonia 30 grains.

1322. Good Tooth Paste.

Powdered pumice..... 1 ounce.
 Powdered cuttle-fish
 bone $1\frac{1}{2}$ ounce.
 Powdered myrrh..... 3 ounces.
 Powdered orris root..... $3\frac{1}{2}$ ounces.
 Powdered precipitated
 chalk 6 ounces.
 Powdered alum..... 1 ounce.
 Curd soap..... 8 ounces.
 Glycerine 12 ounces.
 Rose water..... 10 ounces.
 Otto of rose..... 1 dram.
 Oil of cloves..... 2 drams.
 Shred the soap, mix it with the glycerine,
 and heat on a water-bath till uniform;
 then add the water, and mix with the
 powders, finally adding the perfume.

1323. Odontine Tooth Paste.

Man. of Perfumes.

Carbonate of magnesium. 2 pounds.
 Sugar of milk..... 2 pounds.
 Precipitated carbonate of
 calcium 4 pounds.
 Prepared chalk..... 10 pounds.
 Sugar 4 pounds.

Dissolved in water 5 quarts, best soap-
 powder 2 pounds, alizarin, as coloring mat-
 ter, 7 ounces, peppermint oil 10½ ounces,
 clove oil 8¾ ounces.

Pass the magnesia, sugar of milk, car-
 bonate of calcium, alizarin, soap-powder
 and gum arabic through a fine sieve and
 mix intimately; dissolve the sugar in the
 distilled water and add the glycerine to
 the solution. Bring the sifted powders into
 a mortar or other convenient vessel, gra-
 dually add the fluid and thoroughly mix
 with the hands. Then add the perfume,
 and convert the whole into a solid paste
 with a wooden pestle. Instead of mixing
 and working the mass in a mortar, the
 operation is much more rapidly performed
 by passing the mixture through the rolls
 of a soap mill, which should be thoroughly
 cleansed.

1324. Odontine Tooth Paste.

Carbonate of magnesium 6 pounds.
 Sugar of milk..... 2 pounds.
 Precipitated carbonate
 of calcium 4 pounds.
 Alizarin, to color..... 1¾ ounces.
 Best soap powder..... 7 ounces.
 Powdered gum arabic... 5¼ ounces.
 Sugar 17½ ounces.

Dissolve in distilled water 2½ quarts
 chemically pure glycerine of 28 degrees B.,
 17½ ounces, peppermint oil 8¾ ounces, clove
 oil 8¼ drams.

Directions same as No. 1,323.

1325. Good Tooth Paste.

Honey ½ pound.
 Precipitated chalk..... ½ pound.
 Powdered orris root..... ½ pound.
 Carmine 2 drams.
 Oil cloves..... ½ dram.
 Oil nutmeg..... ½ dram.
 Oil rose ½ dram.
 Simple syrup, q. s. to form a paste.

1326. Nutmeg Tooth Paste.

Glucose 8 ounces.
 Precipitated chalk..... 8 ounces.
 Powdered orris..... 8 ounces.
 Powdered cuttlefish bone 1 ounce.
 Carmine 1½ drams.
 Oil cloves..... ½ dram.
 Oil nutmeg..... ½ dram.
 Oil rose..... ½ dram.
 Simple syrup, sufficient to make a
 paste.

1327. Pink Tooth Paste.

Precipitated chalk..... 200 grains.
 Pumice 100 grains.
 Orris 100 grains.
 Cinnamon 60 grains.
 Cloves 60 grains.
 Oil of cloves..... 6 drops.
 Carmine 5 grains.
 Ammonia 1 drop.
 Honey, enough, or about.. 400 grains.

1328. Ruby Tooth Paste.

Powdered castile soap... 2 ounces.
 Powdered orris..... 6 ounces.
 Precipitated chalk..... 6 ounces.
 Honey 6 ounces.
 Powdered cuttlefish bone.. 2 ounces.
 Powdered pumice..... 1 ounce.
 Powdered catechu..... ½ ounce.
 Powdered cinchona..... ½ ounce.
 Glycerine, q. s. to make paste.
 Solution of carmine N. F., q. s. to
 color.
 Oil cloves..... ½ ounce.
 Oil wintergreen..... ½ ounce.
 Oil nutmeg..... ½ ounce.

The essential oils to be rubbed up with
 the dry powders.

1329. Cretae Cream.

Era Prize.

Precipitated chalk..... 3 ounces.
 Powdered carb. magnesia. 2 drams.
 Powdered white castile
 soap 40 grains.
 Mix and add
 Oil cloves..... 1 minim.
 Oil cassia..... 1 minim.
 Oil orange sweet..... 1 minim.
 Oil lavender flowers..... 1 minim.
 Oil rose geranium (Turk). 3 minims.
 Mix thoroughly, then add a mixture of
 Glycerine 1 fl. ounce.
 Water 6 fl. ounces.
 Triturate for a long time.

1330. White Tooth Paste.

Soft soap..... 5 ounces.
 Glycerine 7 ounces.
 Animal soap..... 15 grains.
 Salicylic acid 20 grains.
 Melt together and add
 Precipitated chalk..... 25 ounces.
 Cuttlefish bone, powdered. 1 ounce.
 Perfume with
 Oil of cassia..... 8 minims.
 Oil of cloves..... 10 minims.
 Otto of rose..... 10 minims.
 Color if desired, with 8 grains carmine
 dissolved in 1½ drams liquor potassae.

1331. Myrrhine Tooth Paste.

Fifty-four parts precipitated chalk, 5 parts arrowroot, 7 parts powdered myrrh, 1 part cinnamon, and sufficient glycerine to make paste. A mixture of 1 part glycerine and 2 parts chloroform water is better than glycerine alone.

1332. Myrrhine Tooth Paste.

Precipitated chalk,
Powdered orris, of each.. 4 ounces.
Powdered white castile soap,
Powdered borax, of each.. 1 ounce.
Powdered myrrh ½ ounce.
Honey,
Glycerine, of each equal
parts to make a paste.
Oil wintergreen..... 30 minims.
Oil peppermint..... 20 minims.

1333. Quinine Tooth Paste.

Red coral..... 3 ounces.
Cuttlefish bone..... 1 ounce.
Bisulphate quinine..... ½ dram.
Honey 4 ounces.
Otto rose..... 2 drops.
Oil neroli 3 drops.
Alcohol 3 drams.

Triturate the red coral and cuttlefish bone to a very fine powder; dissolve the oils in the alcohol, and add to the mixed powders; then add the honey and beat to a smooth paste.

1334. Sinodor Tooth Paste.

Mix 1 kilogram of a 20 per cent solution of magnesium acetate with 60 grams of calcined magnesia, and sufficient carbonate of magnesium to make a thick paste; perfume with oil of peppermint.

1335. Soluble Tooth Paste (Saline Dentifrice).

Bitartrate of potassa or sulphate of potassa (in fine powder), 3 ounces; honey of roses, 2 ounces.

1336. Coral Tooth Paste (Opiat Dentifrice Rouge).

Prepared coral, 8 ounces; cuttlefish bone, 4 ounces; mastic, 2 ounces; cochineal, ¼ ounce; honey, ¾ pound; essence of ambergris, 1 fluid dram; oil of cloves, ½ fluid dram, dissolved in rectified spirit, 1 fluid ounce.

1337. Saponaceous Tooth Paste.

Precipitated chalk..... 2 ounces.
Castile soap..... 1 ounce.
Orris 1 ounce.
Oil of sassafras..... 10 minims.
Oil of bay..... 20 minims.
Honey, enough or about ¾ ounces. ..

1338. Soap Tooth Paste; Spanish Dentifrice.

Castile soap (air dried, in
fine powder) 2 ounces.
Cuttle fish bone 2 ounces.
Narbonne honey 4 or 5 ounces.
Aromatics or perfume (at will), q. s.,
with or without the addition of a little
90 per cent alcohol.

1339. Vienna Tooth Paste.

Powdered castile soap..... 1 ounce.
Precipitated chalk 5 ounces.
Powdered alum ½ ounce.
Powdered gum benzoin..... ½ ounce.
Powdered myrrh ½ ounce.
Carmine 12 grains.
Ammonia water, q. s. 30 minims.
Oil peppermint 5 minims.
Oil cloves 5 minims.
Oil cinnamon 5 minims.
Glycerine, enough to make a paste.

Triturate the carmine with sufficient water of ammonia and incorporate with the chalk, to which have been previously added the oils; then add the remaining dry ingredients, and make into a paste of suitable consistence with the glycerine.

1340. Violet Tooth Paste.

Precipitated chalk 3 ounces.
Powdered cuttlefish bone.... 2 ounces.
Powdered sugar 2 ounces.
Powdered orris 1 ounce.
Smalts 2 drams.

Make the above into a paste with equal parts of glycerine and syrup of violets.

1341. Vanilla Tooth Paste.

Powdered charcoal, powdered cinchona, and vanilla sugar (made by mixing 1 ounce of sugar with 1 dram of tincture of vanilla), each 1 ounce; oil of cinnamon, 10 drops; honey, 1 ounce; the whole well mixed together.

1342. Stick Dentifrice.

Precipitated chalk 11 ounces troy.
Powdered castile soap... 5 ounces troy.
Powdered willow charcoal 20 grains.
Oil of wintergreen..... 80 minims.
Dilute glycerine (1 glycerine to 5 of
water), q. s.

Make into a stiff pill mass; roll and cut in cylinders 4 inches long and ¼ of an inch in diameter.

LIQUID DENTIFRICES, WASHES, ETC.

1343. Antiseptic Dentifrice.

Tincture of myrrh..... 2 fl. ounces.
Thymol 5 grains.
Borax, powdered..... $\frac{1}{2}$ ounce.
Sandal wood, sufficient to color.
Oil of cloves..... 5 drops.
Oil of cinnamon..... 5 drops.
Chloride of zinc..... 4 grains.
Dilute alcohol..... 1 pint.

Mix.

1344. Antiseptic Mouth Wash.

Thymol 2 grains.
Benzoic acid..... 2 scrup. 6 grains.
Bichloride of mer-
cury 9 grains.
Tincture of eucalypt-
us..... $\frac{1}{2}$ ounce.
Oil of peppermint.... 11 grains.
Alcohol $\frac{3}{4}$ ounce.

This is filtered and sufficient of the solution is added to a wine glass of water to cause a distinct turbidity. The mouth is rinsed with this mixture twice successively.

1345. Antiseptic Mouth Wash.

Benzoic acid..... 45 grains.
Tincture eucalyptus.... 4 fl. drams.
Alcohol 25 fl. drams.
Oil peppermint..... 4 minims.

1346. Antiseptic Mouth Wash.

Saccharin $37\frac{1}{2}$ grains.
Benzoic acid..... 45 grains.
Tincture rhatany..... 4 fl. drams.
Absolute alcohol..... 25 drams.
Oil peppermint..... $7\frac{1}{2}$ minims.
Oil cinnamon..... $7\frac{1}{2}$ minims.

1347. Saccharin Preparation for the Teeth.

Saccharin 2 grams.
Dilute alcohol..... 200 grams.
Essence peppermint..... 10 drops.

Mix. For a mouth wash. Half a teaspoonful to a teaspoonful, pure, thrice daily.

1348. Saccharin Preparation for the Teeth.

Saccharin..... 1 gram.
Tincture of myrrh..... 5 grams.
Lavender water..... 95 grams.

Mix. Half a teaspoonful to a teaspoonful as a gargle and mouth-wash after meals. Use undiluted.

1349. Saccharin Preparation for the Teeth.

Saccharin 1 gram.
Cologne water..... 50 grams.
Rose water..... 50 grams.
Mix. Use as above.

1350. Saccharin Preparation for the Teeth.

Saccharin 30 centigrams.
Borax 10 grams.
Peppermint water 50 grams.
Distilled water 450 grams.
Mix. Use as a gargle.

1351. Saccharin Preparation for the Teeth.

Saccharin 2 centigrams.
Essence of cloves 20 centigrams.
Tincture of calamus 5 grams.
Tincture of musk 5 grams.
Alcohol, 60 degrees 50 grams.

Mix. Twenty drops in a glass of water, to be used as a gargle and mouth wash.

1352. Thoe's Mouth Water.

Saccharin 1 part.
Sodium bicarbonate 1 part.
Salicylic acid 4 parts.
Alcohol, 95 degrees 200 parts.

Mix and dissolve. A few drops in a glass of water, make a gargle, to be used frequently.

1353. Reid's Antiseptic Liquid Dentifrice.

Era Prize.

Thymol 2 grains.
Carbolic acid 5 drops.
Oil sassafras 8 drops.
Oil wintergreen 8 drops.
Oil rose geranium (Turk) 8 drops.
Oil eucalyptus 3 drops.
Oil calamus 5 drops.
Oil pinus pumilio 20 drops.
Glycerine 2 ounces.
Alcohol $4\frac{1}{2}$ ounces.
White castile soap 2 drams.
Distilled water, q. s. to.. 16 ounces.
Tincture cudbear aa. q. s.

Color—

Caramel,

Tincture cudbear aa. q. s.

Dissolve the soap in 5 ounces warm water. Dissolve the acid and oils in the alcohol and add to the soap solution. Filter through paper containing a small quantity of calcium phosphate. Add glycerine.

1354. Hladin (Tooth Wash).

Salol 30 grains.
Menthol 45 grains.
Oil peppermint 50 minims.
Oil anise 20 minims.
Alcohol 8 fl. ounces.
Cochineal coloring, q. s.

1355. Tooth Wash.

Thymol 15 grains.
Alcohol 2 pints.
Powdered cochineal 45 grains.
Filter and add—
Oil of peppermint 45 minims.
Cinnamon 23 grains.

1356. Antiseptic Mouth Wash.

Tannic acid ½ ounce.
 Lugol's solution 2 drams.
 Tincture myrrh 2 drams.
 Rose water: enough to
 make 1 pint.

Mix and filter after several days. Two or three teaspoonfuls may be added to a glass of cold or hot water to rinse mouth after eating. Diluted with an equal volume of warm water it is very valuable as an astringent in dentistry, especially after extraction.

1357. Deodorant Dentifrice.

Salicylic acid 120 grains.
 Tincture myrrh 2 ounces.
 Tincture soap bark 2 ounces.
 Cologne 4 ounces.
 Glycerine 1 ounce.
 Alcohol 5 ounces.
 Tincture orris 2 ounces.

1358. Tooth and Mouth Wash.

Sodium salicylate 5.0
 Sodium bicarbonate 2.5
 Dissolve in
 Rose water 100.0
 Then add:
 Tincture cinnamon 20.0
 Alcohol, dilute 25.0
 Oil peppermint 15 drops.
 Filter.

1359. Carboile Dentifrice.

Carbolic acid 1 ounce.
 Tincture quillaia 5 ounces.
 Tincture fresh lemon peel.. 4 ounces.
 Tincture myrrh 6 ounces.
 Alcohol 6 pints.
 Water sufficient to make.. 8 pints.

1360. Salol Tooth Wash.

Cloves 10 parts.
 Ceylon cinnamon 10 parts.
 Cochineal 5 parts.
 Alcohol 1,000 parts.

Macerate 8 days, and add:

Oil peppermint 5 parts.
 Salol 25 parts.

Shake frequently, and filter after 24 hours.

1361. Salol Mouth Wash.

Salol, pure 25 parts.
 Oil of peppermint..... 5 parts.
 Cloves, ground 10 parts.
 Cinnamon, ground 10 parts.
 Staranise, ground 10 parts.
 Cochineal, powdered 5 parts.
 Alcohol 1,000 parts.

Digest the cloves, cinnamon, staranise and cochineal in the alcohol for a week, add the oil of peppermint, and filter. Then dissolve it in the salol.

For use, add enough of the solution (about

30 drops) to a tumblerful of water to give it a decidedly milky appearance.

1362. Astringent Tooth Wash.

Tincture rhatany 2 ounces.
 Tincture red cinchona..... 2 ounces.
 Tincture cardamom co..... 2 ounces.
 Tincture galls 2 ounces.
 Oil wintergreen 60 drops.
 Oil Ceylon cinnamon..... 2 drops.
 Oil cloves 3 drops.
 Alcohol 14 ounces.
 Water 10 ounces.

1363. Mialhe's Liquid Dentifrice.

Kino 2 ounces.
 Rhatany root 2 ounces.
 Macerate for 7 days and filter, then add:
 Tincture tolu 10 drops.
 Tincture benzoin (simple).. 10 drops.
 Oil canella 10 drops.
 Oil peppermint 10 drops.
 Oil anise 5 drops.

1364. Dentifrice Essence.

Orris root 10 grams.
 Pyrethrum root 10 grams.
 Cassia cinnamon 10 grams.
 Soap root 100 grams.
 Sugar 40 grams.
 Sodium carbonate 2 grams.
 Benzoic acid 12½ grams.
 Tannic acid 12½ grams.
 Oil of peppermint..... 10 drops.
 Oil of rose 5 drops.
 Alcohol 750 grams.

Macerate 7 days, express and filter.

Color with fuchsin.

1365. Astringent Tincture for the Teeth and Gums.

Myrrh 12 ounces.
 Orris root 12 ounces.
 Benzoin 6 ounces.
 Cinchona bark 8 ounces.
 Extract krameria..... 1 ounce.
 Capsicum 1 ounce.
 Alcohol 2 gallons.

Macerate for 7 days and filter; to the filtrate add 20 ounces of simple syrup.

1366. Mentholine Mouth Wash.

Menthol 40 grains.
 Oil cloves 1½ fl. drams.
 Oil peppermint 1½ fl. drams.
 Boric acid 9 drams.
 Tincture myrrh 4½ fl. ounces.
 Tincture cudbear, N. F. 2 fl. ounces.
 Alcohol sufficient to
 make 36 fl. ounces.

Dissolve the menthol and boric acid in 20 fluid ounces of the alcohol, add the oils and tinctures, filter, and add enough oil to make 36 fluid ounces.

1367. Eau Dentifrice de Prodhomme.

Angelica root 1 ounce.
 Anise seed 1 ounce.
 Cinnamon 2 drams.
 Nutmeg 2 drams.
 Cloves 2 drams.
 Oil of peppermint 3 drams.
 Alcohol, of 60 per cent. 2 pints.

Macerate 8 days, and distill on a water-bath until no more liquid passes over, and add:

Red Peruvian bark 2 drams.
 Balsam of tolu 2 drams.
 Rhatany root 2 drams.
 Tincture of vanilla 1 dram.
 Powdered cochineal 1 dram.

Macerate 6 days, and filter.

1368. Mentholated Dentifrice.

Star anise 100 parts.
 Cochineal 15 parts.
 Red cinchona bark 15 parts.
 Canella bark 15 parts.
 Cloves 15 parts.
 Pyrethrum root 15 parts.
 Menthol 15 parts.
 Alcohol (95 per cent) 5,000 parts.

Macerate the anise, cochineal, etc., in the alcohol for 8 days, add the menthol, and filter.

1369. Odontine Liquid Dentifrice.

Quillaia 4 ounces.
 Cudbear 1 dram.
 Alcohol, 50 per cent. 32 fl. ounces.

Digest together in a closed vessel for several days and filter. To the filtrate, measuring 32 fluid ounces, add

Heliotropin 2 grains.
 Oil of peppermint 20 drops.
 Oil of anise 10 drops.
 Alcohol 1 fl. ounce.

Allow to stand in a warm place for several days, filtering if necessary, and complete by adding

Glycerine 2 fl. ounces.

1370. Quillaia Tooth Wash.

Soap bark, ground 4 ounces.
 Glycerine 3 ounces.
 Alcohol 12 ounces.
 Water 20 ounces.
 Percolate to obtain 32 ounces.
 Oil wintergreen 20 drops.
 Oil of peppermint 20 drops.

1371. Saponaceous Dentifrice.

Panama Mundwasser.

Tincture quillaia 50.0
 Salicylic acid 10.0
 Dilute alcohol 100.0
 Oil peppermint 1.0

Mix and filter.

Teaspoonful in $\frac{1}{2}$ glass water as a mouth wash.

1372. Foaming Dentifrice.

Soap bark, powdered 2 ounces.
 Glycerine $1\frac{1}{2}$ fl. ounces.
 Salicylate sodium 2 drams.
 Oil bergamot,
 Oil wintergreen, of each 30 minims.
 Oil cloves 10 drops.
 Alcohol 1 fl. ounce.
 Solution carmine, N. F., sufficient to

color.

Dilute alcohol to make 16 fl. ounces.

Macerate the soap bark with the dilute alcohol and glycerine, and percolate. To the percolate add the oils dissolved in the alcohol, and to this add the salicylate of sodium, and sufficient solution of carmine to impart the desired shade of color. Shake thoroughly and filter through wetted talcum, returning first portion of filtrate until the remainder runs through clear. Then add enough dilute alcohol to make one pint.

1373. Rushmere Liquid Dentifrice.

Era Prize.

Soap bark, ground 2 ounces.
 Glycerine $1\frac{1}{2}$ ounces.
 Salicylate sodium 2 drams.
 Oil bergamot $\frac{1}{2}$ dram.
 Oil wintergreen $\frac{1}{2}$ dram.
 Oil cloves 10 drops.
 Alcohol 1 ounce.
 Solution carmine (N. F.) q. s.

Dilute alcohol, to make 16 fl. ounces.

Macerate the soap bark with the diluted alcohol and glycerine, then percolate. To the percolate add the oils dissolved in the alcohol. To this add the salicylate of sodium and sufficient solution of carmine to color. Shake thoroughly and filter through wetted talcum, returning first portion of the filtrate until it runs clear and add enough dilute alcohol through the filter to make the measure 1 pint.

1374. Rose Dentoline.

Era.

Quillaia, coarse powder ... 2 ounces.
 Glycerine 2 ounces.
 Cologne spirits 8 ounces.
 Rose water 2 pints.
 Solution carmine 3 drams.
 Essence vanilla $\frac{1}{2}$ ounce.
 Oil wintergreen 30 drops.
 Oil cloves 10 drops.

Dissolve the oils and essence in the spirits, add the rose water, and in the whole digest the quillaia for 2 weeks, shaking occasionally. Finally add the glycerine and coloring solution and filter.

The carmine solution is made by rubbing 1 dram carmine with $\frac{1}{2}$ ounce aqua ammonia till dissolved, then add $3\frac{1}{2}$ ounces water.

1375. Ladies' Dentifrice.

Liquid carbolic acid..... 20 minims.
 Otto rose..... 5 minims.
 Oil of geranium..... 5 minims.
 Oil of bergamot..... 10 minims.
 Rectified spirit..... 20 fl. ounces.
 Quillaja bark..... 6 drams.
 Solution of carmine, or
 Tincture of saffron, quantity sufficient.

1376. Smoker's Dentifrice.

Oil of cloves..... 15 minims.
 Oil of cassia..... 15 minims.
 Oil of peppermint..... 60 minims.
 Oil of anise..... 90 minims.
 Rectified spirit..... 20 fl. ounces.
 Quillaja bark..... 6 drams.
 Solution of carmine, or
 Tincture of saffron, quantity sufficient.

1377. Thum's Tooth Wash.

Castile soap..... 6 drams.
 Alcohol 4 ounces.
 Glycerine 1 ounce.
 Oil gaultheria..... 25 drops.
 Oil lemon..... 10 drops.
 Water, sufficient quantity to make..... 8 fl. ounces.

1378. Dentine.

Era.

White castile soap..... 1½ ounces.
 Glycerine 4 fl. ounces.
 Cologne spirits..... 6 fl. ounces.
 Hot water..... 6 fl. ounces.
 Oil peppermint..... 20 minims.
 Oil wintergreen..... 30 minims.
 Oil cloves..... 10 minims.
 Extract vanilla..... ½ fl. ounce.
 Carmine coloring, sufficient quantity.

Dissolve the soap in the hot water, add the glycerine and vanilla. Dissolve the oils in the alcohol. Mix the two solutions, add the color, allow to stand 24 hours and filter. (A little powdered charcoal in the filter improves the preparation.)

1379. East India Myrrh (Liquid Dentifrice).

Era.

White castile soap (shavings)..... 12 ounces.
 Carbonate potassium..... 2½ ounces.
 Powdered rhatany..... 1 ounce.
 Glycerine 30 fl. ounces.
 Sugar 30 ounces.
 Water, sufficient quantity,
 Alcohol 1 gallon.
 Oil cinnamon (true)..... ½ fl. ounce.
 Oil gaultheria..... 6 fl. drams.
 Oil anise..... 6 fl. drams.
 Oil cloves..... ½ fl. ounce.
 Oil peppermint..... ½ fl. ounce.

Put the soap in 1 gallon cold water, and add the carbonate potash. Dissolve the

oils in the alcohol. Add the sugar, glycerine and rhatany to 1 gallon cold water and to it add the soap solution and the oil mixture. Lastly, add cold water to make a 5-gallon mixture. Shake daily for two weeks, then leave undisturbed for two weeks. Siphon off the clear solution and filter the rest.

1380. Perfect Tooth Wash.

Era.

Soap shavings (white
 castile)..... 320 grains.
 Oil peppermint..... 12 drops.
 Oil of lemon..... 12 drops.
 Oil cassia..... 8 drops.
 Oil cloves..... 8 drops.
 Oil anise..... 16 drops.
 Oil wintergreen..... 24 drops.
 Extract jockey club
 (Lundborg's) 24 drops.
 Carmine, No. 40..... ½ grain.
 Aqua ammonia..... 4 drops.
 Alcohol 8 fl. ounces.
 Water 8 fl. ounces.

Macerate the soap in the water until soft, dissolve the oils and extracts in the alcohol, and having rubbed the carmine with the ammonia, mix the three solutions, allow to stand 24 hours and filter.

1381. Fluid Dentifrice.

Castile soap..... 2 drams.
 Glycerine 4 drams.
 Alcohol 2 ounces.
 Water 6 ounces.
 Oil of peppermint..... 3 drops.
 Oil of cloves..... 10 drops.
 Oil of cinnamon..... 10 drops.
 Tincture of catechu..... 2 drams.

Mix, let stand for a week, shake up with a little powdered pumice and filter.

1382. Liquid Dentifrice.

Castile soap, in shavings. 1½ ounces.
 Glycerine 4 ounces.
 Cologne spirit..... 6 ounces.
 Hot water..... 6 ounces.
 Oil of peppermint..... 20 minims.
 Oil of wintergreen..... 30 minims.
 Oil of cloves..... 10 minims.
 Extract of vanilla..... ½ ounce.
 Cochlneal mixture, N. F. sufficient quantity.

Dissolve the soap in the hot water, and add the glycerine and vanilla extract. Dissolve the oils in the alcohol. Mix both solutions, add sufficient coloring to produce the desired shade, and after having allowed it to stand for 24 hours, filter through paper.

1383. Favorite Tooth Wash.

Era.

Oil peppermint.....	30 minims.
Oil spearmint.....	15 minims.
Oil cloves.....	15 minims.
Oil cinnamon.....	45 minims.
Tincture cudbear.....	3 fl. drams.
Tincture myrrh.....	1 fl. dram.
Alcohol to make.....	1 pint.

1384. Rubicreme.

Era.

Menthol	2 scruples.
Oil cloves	1½ drams.
Oil peppermint	1½ drams.
Boric acid	9 drams.
Tincture myrrh	4½ ounces.
Tincture cudbear, N. F.	2 ounces.
Alcohol to make	36 fl. ounces.

Dissolve the menthol and boric acid in 20 ounces of the alcohol, add the oils and then the tinctures, filter, and add alcohol to make 36 fluid ounces.

1385. New Tooth Wash.

The root of geranium suelda (Bolivia), dried and coarsely powdered, is steeped in twice its weight of 98 per cent alcohol, thus affording a fine red tincture. Ten drops of the preparation in a glass of water to make a mouth wash. It may also be applied, with great benefit, to decaying teeth with a little pledget of cotton.

1386. Aromatic Dentifrice.

Oil peppermint	20 minims.
Oil spearmint	15 minims.
Oil cloves	15 minims.
Oil cinnamon	45 minims.
Tincture cudbear, N. F.	3 fl. drams.
Tincture myrrh	1 fl. dram.
Alcohol sufficient to make	1 pint.

1387. Eberman's Mouth Wash.

Sweet orange peel	100 parts.
Cinnamon	500 parts.
Cloves	20 parts.
Star anise	60 parts.
Salvia	50 parts.
Benzoin	35 parts.
Cochineal	20 parts.
Alum	20 parts.
Peppermint oil	10 parts.
Oil of anise	3 parts.
Alcohol	1,000 parts.

Macerate the herbs in the alcohol for several days; strain and express, and in the collate dissolve the oils. Dissolve the alum in the smallest quantity of water, and add to the solution; let stand 24 hours and filter. A small quantity dropped into a glass of water makes a delightful mouth wash.

1388. Violet Mouth Wash.

Tincture orris	4 ounces.
Spirits rose	4 ounces.
Alcohol	4 ounces.
Oil of bitter almonds	2 drops.

1389. Elixir Odontalgicum (Ancelot).

Tincture pyrethrum.....	60 grams.
Alcohol, dilute.....	40 grams.
Oil rosemary.....	10 drops.
Oil lavender.....	5 drops.
Oil rose.....	1 drop.

1390. Green Dentifrice Water.

Pyrethrum root	30.0
Cloves	2.0
Orris root	3.0
Coriander	3.0
Creosote	1.5
Oil star anise	2.0
Oil lemon	1.5
Oil vetivert	1.0

1391. Red Dentifrice Water.

Pyrethrum	30.0
Cloves	2.0
Orris root	3.0
Coriander	3.0
Alkanet root	5.0
Oil peppermint	2.5
Oil bergamot	1.0
Alcohol	300.0

Macerate, express and filter.

1392. Vinig's Tooth Elixir.

Cinnamon (crushed)	¾ ounce.
Unbleached Jamaica ginger	
(grated)	½ ounce.
Cloves	1 dram.
Hay saffron	1 dram.
Oil of peppermint	½ dram.
Oil of orange peel	½ dram.
Otto of roses	10 drops.
Rectified spirit	½ pint.

Digest 15 days, decant, and strain through muslin. For toothache, foul breath, etc.

1393. Greenhough's Tooth Tincture.

From bitter almonds, 2 ounces; Brazil wood, cinnamon and orris root, of each ½ ounce; alum, cochineal, and salt of sorrel, of each 1 dram; spirit of scurvy grass, 2 fluid ounces; proof spirit, 1½ pints. Macerate for a week.

1394. Hudson's Tooth Tincture.

From the tinctures of myrrh and cinchona, and cinnamon water, equal parts, with a little arquebusade and gum arabic.

1395. Ruspin's Tooth Tincture.

From orris root, 8 ounces; cloves, 1 ounce; ambergris, 20 grains; rectified spirit, 1 quart; digest for 14 days. The above are used as cosmetics for the teeth and gums. The last has long been a popular dentifrice.

1396. Elixir of Roses, for the Teeth.

Cloves, 1 dram; cinnamon, 3 ounces; ginger, 2 ounces; spirits of wine, 2 pints; oil of orange, 1 dram; otto of roses, 15 drops; essence of peppermint, 1 ounce. Mix. Digest 15 days and filter.

1397. Elixir of Roses.

Eau de rose..... 2 fl. ounces.
 Spirit of horseradish.... 1 ounce.
 Spirit of scurvy grass.. 1 ounce.
 Camphor (powdered).... 12 grains.
 Cochineal (powdered).... 12 grains.
 Otto of roses..... 3 or 4 drops.
 Sugar candy (powdered) ½ ounce.

Digest for a week, decant, and strain through muslin.

1398. Borated Tincture of Myrrh.

Myrrh 1 pound.
 Eau de cologne..... 16 pounds.
 Borax 1 pound.
 Distilled water..... 3 pounds.
 Syrup 3 pounds.
 Essence (or tincture of roses) 6 drams.
 Rhatany root..... 4 ounces.

Digest for 10 or 12 days and filter.

1399. Borated Tincture of Myrrh.

Borax 1 ounce.
 Shellac ½ ounce.
 Myrrh 2 ounces.
 Spirit of camphor..... 2 ounces.
 Honey of roses..... 2 ounces.
 Alcohol 1 pint.
 Cologne essence..... 2 drams.
 Orange flower or rose water 4 ounces.

Digest for a few days in a warm place, shaking occasionally, and filter.

1400. Borated Tincture of Myrrh.

Borax 1 ounce.
 Shellac ½ ounce.
 Water 8 ounces.
 Boll together to 4 ounces and add spirit of scurvy grass 1 pint.
 Camphor ½ ounce.
 Myrrh 2 ounces.

Digest and filter.

1401. Eau de Botot (Dentifrice).

Anise 1 ounce.
 Cloves 2 drams.
 Cinnamon 2 drams.
 Oil of mint..... 1 scruple.
 Brandy 1¾ pounds.
 Tincture of amber..... 1 dram.

After 6 days' infusion, filter.

1402. Eau de Botot.

Cloves 10.
 Cinnamon 10.
 Star anise..... 10.
 Alcohol 600.
 Rose water..... 70.

Pulverize the solids, mix with the alcohol and rose water and macerate 24 hours. To the mixture then add:

Cochineal 2.
 Cream of tartar..... 3.
 Oil peppermint..... 3.3

Let the mixture stand another 24 hours, frequently agitating, and filter. Use 1 teaspoonful with water as a mouth wash.

1403. Eau de Botot.

Tincture of cedarwood... 1 pint.
 Tincture of myrrh..... 4 ounces.
 Tincture of rhatany..... 4 ounces.
 Oil peppermint..... 10 drops.
 Oil rose..... 10 drops.

1404. Dr. Heider's Spirit Dentifrice.

Oil peppermint..... 6 drops.
 Tincture cinchona..... 15 minims.
 Tincture myrrh..... 15 minims.
 Aromatic spirit..... 3 fl. ounces.

1405. Mouth Wash.

Camphor (cut small), ¼ ounce; rectified spirit, 2 fluid ounces; dissolve. A few drops to be added to a wine glassful of water, to sweeten the breath and preserve the teeth.

1406. Mouth Wash.

Chloride of lime, ½ ounce; water, 2 fluid ounces; agitate well together in a phial for half an hour, filter, and add, of rectified spirit, 2 fluid ounces; rose or orange flower water, 1 fluid ounce. Used, highly diluted with water, by smokers and persons having a foul breath.

1407. Mouth Wash.

Mastic (in powder), 2 drams; balsam of Peru, ½ dram; gum, 2 drams, or quantity sufficient; orange flower water, 6 fluid ounces; tincture of myrrh, 2 fluid drams; for an emulsion. In loose teeth, etc.

1408. Mouth Wash.

Tannin, ½ dram; tincture of tolu, 2 fluid drams; tincture of myrrh, 6 fluid drams; spirit of horseradish, 2 fluid ounces; mix. In spongy gums, scurvy, etc.; diluted with tepid water.

1409. Mouth Wash.

Borax, ¼ ounce; water and tincture of myrrh, of each 1 fluid ounce; honey of roses, 2 ounces. In tender or ulcerated gums.

1410. Mouth Wash.

Balsam of Peru, 2 drams; camphor, $\frac{1}{2}$ dram; essence of musk and liquor of ammonia, of each, $\frac{1}{2}$ fluid dram; tincture of myrrh, 3 fluid drams; spirit of horseradish, $1\frac{1}{2}$ fluid ounces. To sweeten and perfume the breath, a teaspoonful in half a wine glassful of tepid water to rinse the mouth with.

PERFUMERY.**1411. Compound Essence of Civet.**

Civet	10.0
Ambergris	5.0
Vanilla	0.25
Sugar milk.....	10.0

Reduce to a fine powder and add to

Alcohol dilute.....500.0

Digest in a closed vessel for 3 days; when cold filter.

1412. Essence Bouquet.

Thirty-two parts rose oil, 8 of ambra, 16 of iris, 2 of bergamot, and 1 of lemon.

1413. Essence Bouquet.

Orris root	4 ounces.
Sandal	4 ounces.
Rose flowers	4 ounces.
Orange peel	4 ounces.
Musk	2 grains.
Cumarin	4 grains.
Vanilla	4 grains.
Oil rose	12 drops.
Oil bergamot	12 drops.
Oil neroli	5 drops.
Oil ylang ylang	5 drops.
Oil geranium	4 drops.
Oil cassia	5 drops.
Oil bitter almond	3 drops.
Extract jasmine	1 ounce.

1414. Fragrant Essence.

Erdbeeressenz.

Acetate amyl	10.0.
Acetic ether	1.0.
Dilute alcohol	90.0.
Tincture orris	300.0.

1415. Heliotrope.

Oil of bergamot	$1\frac{1}{2}$ ounces.
Vanillin	8 grains.
Tincture of benzoin	2 drams.
Rectified spirits	60 ounces.

Dissolve.

1416. Hyacinth.

Hyacinthin	60 parts.
Oil of neroli (bigarade)....	10 parts.
Tincture of musk	50 parts.
Tincture of benzoin	100 parts.
Tincture of jasmin	500 parts.
Alcohol (deodorized)	3,000 parts.
Orange flower water (triple)	300 parts.

1417. Jockey Club (York).

Extract cassia	10 ounces.
Extract rose	20 ounces.
Extract jasmine	10 ounces.
Extract orris	12 ounces.
Extract violet	10 ounces.
Oil of bergamot	3 drams.
Extract civet	2 ounces.
Extract musk	$1\frac{1}{2}$ ounces.
Otto	40 minims.

1418. Jockey Club (York).

Extract jasmine	5 ounces.
Extract orris	20 ounces.
Extract musk	$2\frac{1}{2}$ ounces.
Extract vanilla	2 ounces.
Otto	90 minims.
Oil of sandal	90 minims.
Oil of bergamot	150 minims.
Oil of neroli	40 minims.
Benzoic acid	2 drams.
Rectified spirit to	4 pints.

1419. Lilac.

Essence of tuberose	4 ounces.
Essence of orange flower..	1 ounce.
Tincture of civet (1 dram to 1 pint)	3 drams.
Spirit of bitter almond (5 minims oil to 1 ounce alcohol)	20 minims.

1420. Lily of the Valley.

Extract of jasmine.....	40 ounces.
Extract of ylang ylang....	6 ounces.
Cardamom seeds, bruised.	2 ounces.
Oil of orris.....	10 minims.

Macerate for two weeks or a month if possible. If the odor of the cardamom is found to predominate, add extract of jasmine to neutralize it.

1421. Mary Stuart.

Extract of rose.....	8 drams.
Extract of jasmine.....	3 drams.
Extract of musk (7 in 900)..	2 drams.
Extract of ambergris (7 in 900)	1 dram.
Extract of vanilla (20 in 450)	2 drams.
Extract of florentine orris (1 in 2).....	4 drams.
Alcohol, deodorized.....	32 drams.

1422. Maybells.

Extract jasmine.....	200 parts.
Extract orange blossom....	100 parts.
Extract linaloe.....	10 parts.
Extract kananga.....	5 parts.
Oil mace.....	1 part.
Tincture orris root (1:3)....	10 parts.

1423. New Mown Hay.

Coumarin	12 grains.
Essence of rose.....	$\frac{1}{2}$ dram.
Cologne spirit.....	2 ounces.

1424. Essence of Musk.

Best musk.....	10.0.
Sugar of milk.....	10.0.
Triturate together, then add	
Distilled water.....	200.0.
Alcohol	300.0.
Aqua ammonia.....	5.0.
Macerate 8 days and filter.	

1425. Essence Musk and Ambergris.

Musk	1.0.
Ambergris	2.0.
Sugar milk.....	5.0.
Reduce to a powder and soak in	
Diluted alcohol.....	200.0.
Set aside for several days. Filter.	

1426. New Mown Hay.

Tonka beans, cut.....	75 grains.
Orris root.....	150 grains.
Vanillin	8 grains.
Oil bergamot.....	30 drops.
Oil neroli.....	2 drops.
Oil rose.....	2 drops.
Oil lavender.....	2 drops.
Oil cloves.....	1 drop.
Patchouly herb.....	3 grains.
Benzoic acid.....	8 grains.
Nettle herb.....	30 grains.
Alcohol, deodorized....	7 troy ounces.
Digest 14 days, and filter.	

1427. Extract Millefleurs.

Coumarin	10 grains.
Oil of cinnamon.....	2 drops.
Oil of rose.....	3 drops.
Oil of neroli.....	5 drops.
Oil of lemon.....	15 drops.
Tincture of musk.....	15 drops.
Tincture of benzoin.....	20 drops.
Cologne spirit.....	2 ounces.

1428. Opoponax.

Alcohol	26 ounces.
Musk	$\frac{1}{2}$ dram.
Vanilla	$\frac{1}{2}$ ounce.
Tonquin beans.....	$\frac{1}{4}$ ounce.
Macerate for a month, filter and add:	
Extract of orris.....	10 ounces.
Extract of rose.....	10 ounces.
Extract of orange flowers.	5 ounces.
Extract of cassia.....	5 ounces.
Extract of violet.....	16 ounces.
Oil of citronella.....	13 minims.
Oil of citron.....	60 minims.
Oil of bergamot.....	60 minims.
Oil of lemon.....	15 minims.
Oil of patchouly.....	30 minims.
Oil of rose.....	15 minims.

This recipe, as will be seen, is quite different from the following one.

1429. Opoponax.

Essence of cassia.....	1 pint.
Essence of tuberosc.....	1 pint.
Essence of jasmine.....	$\frac{1}{2}$ pint.
Tincture of orris (1 to 4).....	$\frac{1}{2}$ pint.
Tincture of benzoin (1 to 4).....	$\frac{1}{2}$ pint.
Tincture of tolu (1 to 8).....	$\frac{1}{4}$ pint.
Tincture of ambrette seed (1 to 4)	$\frac{1}{4}$ pint.
Tincture of musk (1 to 23)....	$\frac{1}{2}$ pint.
Rose water	$\frac{1}{4}$ pint.

1430. Compound Essence of Orris.

Vanilla, cut very small....	2 drams.
Orris root, bruised.....	6 drams.
Essence of Peruvian balsam	1 ounce.
Rectified spirit.....	15 ounces.
Macerate fourteen days, and filter.	

1431. Persian Bouquet.

Oil rhodium.....	1 dram.
Oil rose.....	1 dram.
Oil bitter almonds.....	20 drops.
Oil cloves.....	10 drops.
Oil petit grain.....	1 dram.
Tincture orris root.....	8 ounces.
Tincture vanilla.....	4 ounces.
Tincture musk.....	1 ounce.
Rose water.....	4 ounces.
Cologne spirit, quantity sufficient ad.....	4 pints.

Mix the oils and the tinctures with the spirits, and lastly add the rose water; shake well; allow to stand 3 days and filter.

1432. Sweet Briar.

Oil lavender.....	40 drops.
Oil bergamot.....	80 drops.
Oil lemon.....	80 drops.
Otto rose.....	8 drops.
Oil verbenia.....	1 drop.
Essential oil almonds.....	1 drop.
Essence musk.....	120 drops.
Rectified spirit.....	1 ounce.

1433. Victoria.

Cloves, bruised.....	2 scruples.
Vanilla, cut small.....	1 dram.
Oil of cedrat.....	4 drops.
Oil of sandal.....	1 dram.
Cinnamon	12 grains.
Oil of verbenia.....	8 drops.
Otto of roses.....	8 drops.
Oil of neroli.....	20 drops.
Oil of lavender.....	1 dram.
Ambergris	16 drams.
Tincture of musk.....	1 dram.
Alcohol	16 fl. ounces.

Digest for a few days and filter. Or the whole, except the ambergris and musk, may be distilled in a water bath, and these added to the distilled spirit.

1434. Victoria.

Vanilla	½ dram.
Yellow saunders.....	6 drams.
Cloves	No. 16
Neroli	3 drops.
Oil of lavender.....	6 drops.
Alcohol	4 ounces.

Digest for 3 days and add 4 ounces of orange flower water, water quantity sufficient; distill 6 ounces, add essence of musk 1 dram.

1435. White Heliotrope.

Heliotropin	2 drams.
Extract of white rose.....	1 ounce.
Extract of jasmine.....	1 ounce.
Essence of musk	½ ounce.
Alcohol	40 ounces.

1436. White Heliotrope.

Essence of neroli (1 in 39 alcohol) 4 ounces.
Oil of bergamot 1 dram.
Essential oil of almonds.... 4 minims.
Add to the preceding after allowing each to stand separately for a week.

1437. White Heliotrope.

Crude coumarin	16 grains.
Vanillin	16 grains.
Heliotropin	16 grains.
Essence of rose from po- made	1 ounce.
Essence of rose, "triple"..	1 ounce.
Oil of bitter almond.....	6 drops.
Deodorized alcohol	6 ounces.

1438. White Lilac.

Extract tuberose	20 ounces.
Extract rose	10 ounces.
Extract orange	7 ounces.
Oil almonds	5 minims.
Extract civet	⅔ ounce.

1439. White Rose.

Oil rose	15 drops.
Patchouly herb	3 grains.
Musk	3 grains.
Deodorized alcohol	7 troy ounces.

Digest 14 days, and filter.

1440. White Rose Perfume, Cheap.

Otto of rose (Sec.), 25 minims; oil of geranium, 10 minims; oil of patchouly, 3 minims; tincture of orris (1 in 2), 1 ounce; distilled water, 1 ounce; alcohol, sufficient to make 5 ounces.

1441. Ylang Ylang.

Oil of ylang ylang.....	370 grains.
Oil of neroli, petale.....	48 drops.
Oil of rose	115 drops.
Oil of lemon	48 drops.
Musk	16 drops.
Alcohol (deodorized).....	30 pints.

1442. Ylang Ylang.

Orris root	12 ounces.
Rose flowers	12 ounces.
Orange peel	16 ounces.
Coumarin	2 grains.
Vanillin	4 grains.
Civet	1 grain.
Musk	1 grain.
Oil ylang ylang	30 drops.
Oil rose	20 drops.
Oil bergamot	10 drops.
Essence jasmine	1 ounce.

1443. Spiritus Melissa Compositus.

Melissa, dried and cut, 8 parts; lemon peel, fresh cut, bruised nutmeg, bruised coriander, of each 2 parts; bruised cloves, bruised cinnamon, of each 1 part; alcohol, 55 parts; water, 70 parts. Macerate during 1 day and distill off 72 parts. The specific gravity of the distillate should be 0.906.

**1444. Compound Tincture of
 Ambergris.**

Ambergris	60 grains.
Musk	30 grains.
Oil of Ceylon cinnamon..	18 minims.
Oil of rhodium	12 minims.
Potassium carbonate....	1½ drams.
Spirit	8 ounces.
Spirit of rose	4 ounces.

1445. Tincture Musk.

Tonquin musk.....	11 drams.
Rose water	8 drams.
Alcohol, best quality.....	2 quarts.

Carefully empty the musk sacs into a glass flask, add the rose water and let the flask stand about 10 days, shaking frequently. Then add the alcohol, and let the whole stand for several weeks, shaking frequently. Cut up the empty musk sacs into as small pieces as possible, and, in another bottle, treat them in the same manner as their contents; distilled water may be used instead of rose water.

The extract from the empty musk sacs is used for cheaper products, or mixed with the extract from the contents of the sacs, according to whether a more or less fine quality of tincture is to be obtained.

1446. Tincture Musk.

Tonquin musk.....	60 grains.
Powdered pumice stone....	75 grains.
Hot water	2 ounces.
Alcohol	14 ounces.
Aromatic spirits of ammo- nia	40 drops.

Rub the pumice and musk together, add the hot water and let stand 12 hours, then add the alcohol and ammonia and macerate for 4 weeks.

1447. Tincture Musk Ammoniated.

Musk	1.0.
Ammonium carbonate.....	0.2.
Intimately mix with—	
Alcohol	15.0.
Distilled water	5.0.
Oil peppermint	2 drops.

1448. Tincture Orris Root.

Pulverized orris root, best quality	2 pounds.
Alcohol, best quality	3 quarts.

Pulverize the root, bring it into a glass flask, and add the alcohol. Shake five or six times daily for 14 days. In straining off the mixture the entire contents of the flask should be poured upon a close linen cloth stretched over a tin vessel. The orris root powder remaining upon the cloth after the tincture has run off is returned to the flask, and fresh alcohol added in order to obtain a second extract.

1449. White Rose Solid Perfume.

Oil of geranium	½ dram.
Oil of bergamot	½ dram.
Oil of patchouly	5 minims.

From one to five drops to each block may be used.

1450. Lavender Solid Perfume.

Oil of lavender	2 ounces.
Essence of bergamot	1 ounce.
Oil of cassia	5 minims.
Oil of geranium	40 minims.
Oil of orange	5 minims.

Mix, and perfume the wax.

1451. Bouquet Solid Perfume.

Oil of coriander	18 minims.
Oil of cloves	2 minims.
Oil of nutmeg	1 dram.
Oil of lavender	3 drams.
Oil of sandal	1 dram.
Oil of bergamot	1 ounce.
Otto of rose	½ dram.
Oil of geranium	½ dram.
Oil of orange	10 minims.

1452. Cologne Solid Perfume.

Essence of bergamot	1 ounce.
Essence of lemon	1 ounce.
Oil of citronella	½ ounce.
Oil of neroli	½ ounce.
Oil of rosemary	80 minims.
Oil of geranium	10 minims.

1453. Solid Perfume.

Oil of bergamot.....	4 drams.
Oil of rose geranium.....	20 minims.
Oil of neroli.....	30 minims.
Oil of lemon.....	1 dram.
Oil of orange.....	1 dram.
Oil of rosemary.....	20 minims.
Oil of lavender.....	20 minims.

Sufficient for 4 ounces of paraffin.

1454. Solid Perfume.

Oil of lavender.....	2 drams.
Oil of cloves.....	1 dram.
Oil of rose geranium.....	20 minims.
Oil of bergamot.....	2 drams.
Vanillin	10 grains.
Glycerine	1 dram.

This is sufficient for 4 ounces of paraffin.

1455. Solid Perfume.

Oil of lign aloe.....	2 drams.
Heliotropine	20 grains.
Oil of bergamot.....	20 minims.
Oil lemon.....	20 minims.
Glycerine	1 dram.

Sufficient for 4 ounces of paraffin.

1456. Solid Perfumes.

Oil of neroli.....	1 dram.
Oil of rose geranium.....	1 dram.
Oil of lavender	1 dram.
Oil of bergamot.....	2 drams.
Oil of cloves.....	4 minims.
Heliotropin....	20 grains.
Glycerine	1 dram.

This is sufficient for a half pound of paraffin.

1457. Solid Perfume.

Oil of ylang ylang.....	2 drams.
Coumarin	20 grains.
Essence musk.....	20 grains.
Oil neroli.....	1 dram.
Oil of sandal wood.....	30 minims.
Glycerine.....	1 dram.

Sufficient for 4 ounces of paraffin.

COLOGNES.

1458. Eau de Cologne.

Oil of bitter almonds.....	5 minims.
Oil of cloves.....	10 minims.
Oil of rosemary.....	6 minims.
Oil of citronella.....	6 minims.
Oil of cassia.....	6 minims.
Oil of origanum, pale.....	5 minims.
Oil of rhodium.....	8 minims.
Oil of lemon.....	1 dram.
Oil of bergamot.....	2 drams.
Oil of rose.....	5 minims.
Essence of musk.....	2 drams.

(20 grains to 2 ounces)

Orange flower water..... 6 ounces.

Alcohol, enough to make. 40 ounces.

1459. Eau de Cologne.

Oil of bergamot.....	2 drams.
Oil of lemon.....	1 dram.
Oil of neroli.....	20 drops.
Oil of orlganum.....	6 drops.
Oil of rosemary.....	20 drops.
Rectified spirit (treble dist.)	20 ounces.
Orange flower water.....	1 ounce.

Mix in above order.

1460. Eau de Cologne, Double.

Oil of petit grain.....	42 grams.
Oil of neroli.....	35 grams.
Oil of bergamot.....	32 grams.
Oil of Portugal.....	32 grams.
Oil of rosemary.....	30 grams.
Oil of lavender.....	30 grams.
Oil of orange.....	30 grams.
Jasmine water.....	60 grams.
Orange flower water.....	60 grams.
Deodorized alcohol.....	10 pounds.

Dissolve the oils in the alcohol; then add the waters. Allow the mixture to stand 14 days, and distill. Transfer the distillate to the bottles, and let it stand for at least 9 months before using it.

1461. Eau de Cologne, Eng.

Oil lavender.....	1 dram.
Oil neroli.....	2 drams.
Oil lemon.....	1½ drams.
Oil bergamot.....	3 drams.
Oil rose.....	3 minims.
Musk	2 grains.
Tonka powdered.....	No. 1.
Benzoin	20 grains.
Alcohol	40 ounces.

Digest for two or three days, and then add:

Powdered talcum.....	3 drams.
Orange flower water....	2 ounces.

Let the mixture stand 7 days, then filter.

1462. Eau de Cologne, White's.

Oil of bergamot	1 ounce.
Oil of lemon	2 ounces.
Oil of orange	2 ounces.
Oil of rosemary	1 ounce.
Oil of neroli	2 drams.
Oil of rose geranium	4 drams.
Oil of cloves	2 drams.
Extract of musk	1 ounce.
Orange flower water	1 pint.
Alcohol	1 gallon.

1463. Eau de Cologne, Maiglockchen.

Alcohol, 85 to 96 per cent, best quality	10.56 quarts.
Bergamot oil.....	3.52 ounces.
Lemon oil.....	3.52 ounces.
Neroli oil.....	0.7 ounces.
French extract lavender oil	0.21 ounces.
Rosemary oil.....	0.14 ounces.
Best German balm oil..	0.7 ounces.
Ylang-ylang oil.....	0.17 ounces.
Maiglockchen (lily of the valley) extract....	2.11 pints.

Dissolve the ylang-ylang oil by itself in 0.8 pint of alcohol of the best quality, and when the solution is entirely clear, add it to the rest in a glass vessel. After standing

for 14 days add carefully orange-blossom water and rose water each 1.05 pints; shake thoroughly and let the mixture stand quietly until perfectly clear.

1464. Cologne.

Oil of neroli.....	1 fl. dram.
Oil rosemary flowers.....	1½ fl. drams.
Oil lemon	2½ fl. drams.
Oil bergamot.....	1½ fl. drams.
Oil sweet orange.....	3½ fl. drams.
Musk	2 grains.
Cologne spirit.....	2 pints.
Distilled water.....	½ pint.

Rose water may be substituted in part for distilled water.

1465. Cologne.

Oil of neroli.....	½ fl. dram.
Oil jasmine.....	1 fl. dram.
Oil lavender flowers.....	½ fl. dram.
Oil bergamot.....	4 fl. drams.
Tincture of musk.....	1 fl. dram.
Benzoated tincture.....	6 fl. drams.
Oil Ceylon cinnamon.....	¼ minim.
Cologne spirit.....	2½ pints.
Rose water.....	½ pint.

1466. Cologne.

Tincture of benzoin.....	½ fl. dram.
Oil lavender flowers.....	½ fl. dram.
Oil rosemary flowers.....	¼ fl. dram.
Oil lemon.....	1 fl. dram.
Oil bergamot.....	1 fl. dram.
Oil sweet orange.....	¾ fl. dram.
Oil rose geranium.....	5 minims.
Oil neroli	3 minims.
Musk bauer.....	1 grain.
Cologne spirit.....	14 fl. ounces.
Distilled water.....	2 fl. ounces.

1467. Cologne.

Oil of clove.....	10 minims.
Oil cassia.....	5 minims.
Oil neroli.....	15 minims.
Oil rosemary flowers.....	30 minims.
Oil lemon	4 fl. drams.
Oil bergamot.....	2 fl. drams.
Oil lavender flowers.....	4 fl. drams.
Benzoated tincture.....	2 fl. drams.
Powdered Florentine orris.	1 ounce.
Cologne spirit.....	6 pints.
Rose water	1 pint.
Distilled water.....	1 pint.

Macerate one month and filter.

1468. Cologne.

Oil bergamot	2 drams.
Oil lemon	1 dram.
Oil of neroli, big	20 drops.
Oil origanum flowers	6 drops.
Oil rosemary flowers	20 drops.
Cologne spirits	1 pint.
Orange flower water	1 ounce.

1469. Cologne.

Cologne spirits	3 pints.
Extract rose xxx.....	1 pint.
Extract musk	3¾ ounces.
Tincture ambergris	4 ounces.
Tincture vanilla	2 ounces.
Tincture orris	8¾ ounces.
Tincture tonka	4 ounces.

1470. Cologne.

Oil lavender	1 dram.
Oil bergamot	2 drams.
Oil lemon	2 drams.
Alcohol	4 pints.
Distilled water	4 ounces.
Orris root	1 ounce.
Tincture benzoin	½ ounce.
Vanilla	10 grains.
Musk	1 grain.
Jasmine	½ ounce.

Mix. Let stand for some time, then filter.

It is best to mix enough oil for four lots, using 2½ ounces to ½ gallon of alcohol.

1471. Cologne.

Oil neroli	1 part.
Oil patchouly	2 parts.
Oil sandal	2 parts.
Oil lavender.....	3 parts.
Oil rose geranium.....	3 parts.
Oil Canada snake root....	9 parts.
Tincture musk.....	40 parts.
Deodorized alcohol.....	800 parts.
Water	140 parts.

1472. Cologne.

Bergamot oil.....	2 drams.
Oil of lemon.....	2 drams.
Oil of origanum.....	6 drops.
Oil of rosemary.....	20 drops.
Alcohol	1 pint.
Orange flower water.....	1 ounce.

1473. Cologne.

Bergamot oil	14 parts.
Citron oil	34 parts.
Oil of neroli (petale)	20 parts.
Oil of neroli (bigarade) ..	7 parts.
Rosemary oil	14 parts.
Grape spirit	6,000 parts.

1474. Cologne.

Cologne spirits.....	3 quarts.
Oil of lemon.....	5 drams.
Oil of bergamot.....	4 drams.
Portugal oil.....	3¾ drams.
Neroli oil.....	¾ dram.
Petit grain oil.....	½ dram.
Rosemary oil.....	½ dram.
Lavender oil.....	25 drops.
Oil of cloves.....	6 drops.
Extract Pomn. jasmine..	4 ounces.
Warm water.....	32 ounces.

Mix.

1475. Cologne.

Oil of bergamot.....	20 parts.
Oil of lemon.....	20 parts.
Oil of musk (2 per cent.)	5 parts.
Oil of neroli.....	2 parts.
Oil of cinnamon (Ceylon)...	1 part.
Oil of cloves.....	1 part.
Oil of rose.....	1 part.
Alcohol (deodorized).....	1,800 parts.
Water	150 parts.

Mix them; put the mixture aside for 8 days in a cool place, frequently shaking, finally filter.

1476. Cologne.

Oil of neroli.....	2 parts.
Oil of rosemary.....	1 part.
Oil of lemon.....	3 parts.
Oil of bergamot.....	1 part.
Oil of orange.....	3 parts.

One kilogram of this mixture is dissolved in 60 litres of alcohol (85 to 90 per cent.); the solution is heated to 60 degrees C. (140 F.) and subsequently filtered. The heating effects the blending of the perfumes in a short time, which otherwise takes place only after several months.

1477. Cologne.

Oil of lavender, finest.	2 grams.
Oil of neroli.....	2 grams.
Oil of lemon.....	10 grams.
Oil of bergamot.....	25 grams.
Musk	0.015 gram.
Alcohol (deodorized)....	500 grams.

Mix, set aside a few days, repeatedly shaking, then filter. The musk is to be saturated with a little water before being added.

1478. Cologne (First Quality).

Bring into a large glass vessel 95 to 96 per cent. alcohol of the best quality 7.9 gallons, lemon oil 14.11 ounces; bergamot oil 15, neroli oil 4.23, French extract lavender oil 1.05 ounces, rosemary oil 0.7, best German balm oil 0.42; mix thoroughly, and after 14 days add best orange-blossom water and rose water each 2.64 quarts. Mix again thoroughly, and let stand until used.

1479. Cologne (First Quality).

Oil neroli, best.....	6 drams.
Oil rosemary.....	3 drams.
Oil bergamot.....	3 drams.
Oil cedrat.....	7 drams.
Oil orange peel.....	7 drams.
Deodorized alcohol.....	1 gallon.

Let stand 1 week.

1480. Cologne (Second Quality).

Bring into a large glass vessel
 Alcohol, 95 to 96 per cent., best quality.... 7.9 gallons.
 Lemon oil..... 10.58 ounces.
 Bergamot oil..... 12.34 ounces.
 Neroli oil..... 1.76 ounces.
 French extract lavender oil 0.8 ounces.
 Rosemary oil..... 0.63 ounces.
 Finest German balm oil. 0.35 ounces.
 French petit grain oil.. 0.8 ounces.

Mix thoroughly, and after 14 days add best orange blossom water and rose water each 2.64 quarts. Mix again thoroughly, and let stand until wanted for use.

1481. Cologne (Third Quality).

Bring into a large glass vessel
 Alcohol, 95 to 96 per cent., best quality..... 7.9 gallons.
 Lemon oil..... 7.05 ounces.
 Bergamot oil..... 7.94 ounces.
 Portugal oil..... 3.52 ounces.
 French petit grain oil.. 1.58 ounces.
 Finest rosemary oil..... 0.52 ounces.
 Lavender oil..... 0.7 ounces.
 Orange blossom water.. 1.58 quarts.
 Rose water..... 1.58 quarts.
 Distilled water..... 2.11 quarts.

Mix thoroughly, and let stand 14 days. Mix again thoroughly, and let stand until wanted for use.

1482. Cologne (Fourth Quality).

Bring into a large glass vessel
 Alcohol, free from fusel oil 7.9 gallons.
 Lavender oil 2.64 ounces.
 Portugal oil..... 2.64
 Petit-grain oil..... 0.7
 Rosemary oil 0.52
 Bergamot oil..... 3.52
 Lemon oil..... 3.52
 Distilled water..... 7.9 quarts.

If this quality, after standing for some weeks, should not become clear, use some magnesia in filtering, or use less water.

1483. Cologne (Fifth Quality).

Bring into a glass vessel
 Alcohol, free from fusel oil 7.9 gallons.
 Portugal oil..... 0.88 ounces.
 Rosemary oil..... 0.88
 Lavender oil,
 Bergamot oil,
 Lemon oil, of each..... 1.76

After standing for 14 days add 7.9 quarts of distilled water, mix thoroughly and let stand until used.

1484. Cologne (Ordinary).

Oil lavender..... $\frac{1}{2}$ ounce.
 Oil rosemary..... $\frac{1}{2}$ ounce.
 Oil bergamot..... 1 ounce.
 Oil lemon..... 2 ounces.
 Oil cloves..... $\frac{1}{2}$ dram.
 Deodorized alcohol..... 1 gallon.

1485. Cologne, Antiseptic.

Eau de cologne..... 8 ounces.
 Chloral hydrate..... 2 drams.
 Quinine alkaloid..... 10 grains.
 Acid carbolic..... 30 grains.
 Oil lavender..... 20 drops.

1486. Caroline Cologne.

Oil of bergamot,
 Oil lavender,
 Oil rosemary,
 Oil lemon, of each..... $1\frac{1}{2}$ ounces.
 Oil citronella,
 Oil neroli,
 Essence of musk,
 Oil of cloves, of each..... 1 dram.
 Alcohol 4 pints.
 Rose water..... 2 pints.

Dissolve the oils in the alcohol, add the rose water and filter.

1487. Euclid Avenue Cologne.

Oil of orange..... 2 drams.
 Oil of lemon..... 1 dram.
 Oil of rosemary..... $1\frac{1}{2}$ drams.
 Oil of neroli..... 5 drops.
 Oil of rose..... 5 drops.
 Spirit of musk..... 2 drams.
 Tincture of cardamom.. 3 drams.
 Alcohol 24 ounces.
 Water 8 ounces.
 Tonka bean, cut..... 2 ounces.
 Powdered orris root..... 1 ounce.

Dissolve the oils in the alcohol, then add the rest of the ingredients; macerate for 10 days, filter through animal charcoal and paper.

1488. Farina Cologne.

Oil of neroli..... 1 dram.
 Oil lemon..... 4 drams.
 Oil lavender..... $\frac{1}{2}$ dram.
 Deodorized spirit..... 14 ounces.

Rose water sufficient to bring the mixture up to 1 pint.

Macerate in a wooden vessel for the space of three months.

1489. Farina Cologne.

Oil of neroli..... 5 drams. 20 drops.
 Oil of bergamot..... 1 ounce.
 Oil of rosemary
 flowers 1 dram. 20 drops.
 Cologne spirit..... 6 pints.
 Orange flower water.. 2 pints.

Mix them. Set aside for 20 days; filter through magnesia and paper.

1490. Golden Farina Cologne.

Tincture of Canada snake
root 4 ounces.
Tincture orris root..... 12 ounces.
Oil of lavender,
Oil of bergamot,
Oil of lemon, of each..... 6 drams.
Essence of musk,
Oil of neroli,
Oil cinnamon,
Oil cloves, of each..... 1 dram.
Orange flower water..... 8 ounces.
Cologne spirits, sufficient
to complete..... 6 pints.

1491. Fenner's Golden Gem Cologne.

Oil lemon..... 3 ozs., 3 drs.
Oil bergamot..... 6 ozs., 6 drs.
Oil lavender flower..... 1 oz., 1 dr.
Oil neroli..... 6 drams.
Oil rose..... 1 ounce.
Cologne spirit..... 4½ gallons.
Water 4 pints.
Lundborg's extract musk 1 pound.

Mix thoroughly and let stand three weeks.

1492. French Cologne Water.

Oil of bergamot, 10 grams; oil of Portugal, 10 grams; essential oil of lemon, 10 grams; oil of orange leaves, 2 grams; essential oil of rosemary, 2 grams; alcohol at 90 degrees, 966 grams.

1493. Frou Frou Cologne.

Oil neroli..... ½ ounce.
Oil lavender flowers
(French)..... ½ ounce.
Oil cloves..... 2 drams.
Oil rose..... 1 dram.
Tincture musk..... 2 ounces.
Tincture orris..... 8 ounces.
Orange flower water..... 6 ounces.
Cologne spirit (deodorized
alcohol), q. s., add..... 4 pints.

Mix the oils and tinctures with the spirit; shake well and gradually add the orange flower water; then allow to stand three days and filter.

1494. Genuine Cologne Water.

Benzoin (purified)..... 2 ounces.
Oil lavender..... 4 ounces.
Oil rosemary..... 2 ounces.
Stronger alcohol..... 9 gallons.

To this solution are added successively:

Oil neroli..... 10 2-5 ounces.
Oil neroli (petit grain).. 10 2-5 ounces.
Oil of lemon..... 10 2-5 ounces.
Oil of sweet orange..... 20 4-5 ounces.
Oil of lemon..... 20 4-5 ounces.
Oil of bergamot..... 20 4-5 ounces.
Tincture of rose geranium fluid, sufficient quantity.

Macerate for some weeks; then fill into flasks.

1495. German Cologne.

Alcohol..... 5 gallons.
Oil lemon..... 4 ounces.
Oil bergamot..... 4 ounces.
Oil neroli..... 1 ounce.
Oil sandal wood..... 2 ounces.
Camphor..... ¼ ounce.
Let it stand 14 days.

1496. German Cologne.

Oil of lavender..... 1 dram.
Tincture of benzoin..... 1 dram.
Oil rosemary flowers..... 30 drops.
Oil of neroli..... 3½ drams.
Oil of lemon..... 2½ drams.
Oil of orange..... 4½ drams.
Oil of bergamot..... 6 drams.
Oil of rose geranium... 2 drops.
Alcohol 2 pints.
Orange flower water.... 1 ounce.

Filter through carbonate of magnesium and paper.

1497. Cologne, Improved.

Slam benzoin..... 15 grains.
Oil of lavender..... 30 grains.
Oil of rosemary (flowers). 15 grains.
Oil of neroli..... 80 grains.
Oil of petit grain..... 80 grains.
Oil of cedrat..... 80 grains.
Oil of Portugal..... 160 grains.
Oil of lemon..... 150 grains.
Oil of bergamot..... 150 grains.
Oil of rose geranium.... 15 grains.
Alcohol, 95 per cent..... 68 fl. ounces.

The essential oils (all by weight) are dissolved in the order given above in the spirit, and then the finely powdered benzoin is added. Allow to stand with frequent agitation for at least four weeks; place in a still, add an equal quantity of water and distill over about 64 fluid ounces, having previously collected and set aside the first ounce. Allow the distillate (64 fluid ounces) to stand another four weeks in a glass vessel, which is exposed to sunlight or diffused daylight; the longer the water is kept the better it is.

1498. Joekey Club Cologne.

Oil bergamot 2 ounces.
Oil lemon 2 drams.
Oil lavender 1 dram.
Oil neroli 1 dram.
Oil cinnamon 10 drops.
Oil cloves 5 drops.
Essence of jasmine..... 2 ounces.
Tincture of vanilla..... 1 ounce.
Tincture of musk..... 1 dram.
Tincture of ambergris..... 1 dram.
Otto of roses..... 10 drops.
Cologne spirit, 95 per cent,
enough to complete..... 1 gallon.

Macerate together for three or four weeks, and filter.

1499. Cologne, With Musk.

Oil neroli	2	drams.
Oil rose geranium.....	1	dram.
Tincture musk (1 dram to 1 pint)	4	ounces.
Tincture orris (8 ounces percolated to 1 pint).....	4	ounces.
Tincture civet (1 dram to 1 pint)	2	drams.
Deodorized alcohol	3½	pints.

1500. Newport Cologne.

Oil yellow sandal.....	1½	drams.
Oil patchouly	1½	drams.
Oil lavender flowers.....	6	drams.
Oil bergamot	1½	drams.
Oil white thyme.....	4	drams.
Oil cloves	4	drams.
Oil neroli	1½	drams.
Oil rose geranium.....	4	drams.
Tincture orris	6	ounces.
Tincture musk	3	ounces.
Tincture ambergris	3	ounces.
Tincture civet	3	ounces.
Cologne spirit (deodorized alcohol) q. s. to make..	1	gallon.

This cologne will retain its odor for several days, when made as directed.

1501. Orange Blossom Cologne.

Oil rosemary flowers..	5.	grams.
Oil orange, sweet.....	5.	grams.
Oil neroli bigarade....	5.	grams.
Orange flower water..	60.	c. c.
Berberin sulphate065	grams.
Cologne spirits	500.	grams.

1502. Portugal Cologne.

Oil of orange peel.....	8	ounces.
Oil of lemon.....	2	ounces.
Oil of bergamot.....	1	ounce.
Oil of rose.....	2	drams.
Alcohol	1	gallon.

1503. Prize Cologne

Essence of bergamot.....	2	drams.
Essence of lemon.....	1	dram.
Oil of neroli.....	20	drams.
Oil of origanum.....	6	drops.
Oil of rosemary.....	20	drops.
Rectified spirit of wine, treble-distilled	1	pint.
Orange-flower water	1	ounce.

1504. Triple Cologne.

Oil cedrat	6.0	grams.
Oil bergamot	6.0	grams.
Oil neroli	1.0	grams.
Oil lavender flowers....	1.5	grams.
Oil rosemary flowers....	1.5	grams.
Oil cinnamon, Ceylon...	0.8	grams.
Oil cloves	0.8	grams.
Extract musk	1.2	grams.
Tincture benzoin	6.0	grams.
Cologne spirit	1000.0	grams.

1505. White Rose Cologne.

Triple extract white rose..	1	ounce.
Oil rose	3	drops.
Oil rose geranium.....	3	drops.
Cologne spirits	26	ounces.
Hot water	6	ounces.
Coloring, quantity sufficient.		

1506. White Rose Cologne.

Three and three-quarter grams of oil of rose, 1¾ grams oil of bergamot, 10 drops oil patchouly and 3¾ grams oil of pomegranate are dissolved in 2¼ liters of cologne spirit. To this is then added 250 grams tincture of violet, 60 grams each tincture of musk and tincture of civet, and 250 grams rose water. After three days filter through 15 grams of magnesia, and color green with chlorophyl.

1507. Cologne for Sick Room.

Salicylic acid	½	dram.
Diluted alcohol	4	fl. ounces.
Oil cinnamon	1	drop.
Oil bergamot	15	drops.
Balsam Peru	½	fl. dram.

Make a solution.

In order to make a clear solution of the above formula, dissolve the balsam of Peru in the spirits and filter, then adding balance of ingredients. The aromatics used in perfuming the above solution are as nearly chemically compatible to salicylic acid as practicable.

1508. Cologne for Sick Room.

Salicylic acid	20	grains.
Oil gaultheria	5	drops.
Diluted alcohol	2	fl. ounces.

Mix.

In the above recipe, in the place of the oil of gaultheria, use the same amount of oil of anise, which is also of itself a powerful deodorizer, and may be preferred by many.

The basis of these solutions is salicylic acid, and any other combination of odors can be added, if desired, which would harmonize with the salicylic acid. For example:

Salicylic acid	20	grains.
Farina cologne	2	fl. ounces.

Mix.

1509. Superior Bouquet.

Triple extract of jasmine	1½	drams.
Oil of bergamot.....	50	drops.
Oil of lemon.....	5	drops.
Oil of lavender.....	3	drops.
Oil of cloves.....	1	drop.
Oil of orris.....	1	drop.
Civet	½	grain.
Coumarin	¾	grain.
Heliotropin	1-6	grain.
Spirit	5	ounces.

Mix and dissolve.

TOILET WATERS.

1510. Aqua Atheniensis.

Borax	1.5
Dissolve in	
Glycerine	30.0
Rose water	100.0
Then mix with	
Musk cologne water.....	20.0
Tincture quillaja	50.0
Stand aside several days and filter.	

1511. Aqua Mellis.

Coriander seed	7 pounds.
Cloves	12 ounces.
Storax	8 ounces.
Nutmegs (bruised)	8 ounces.
Lemon peel	10 ounces.
Calamus	6 ounces.
Proof spirit	15 pints.
Water	8 pints.

Macerate for a month in a closed vessel, then distill 22 pints, and to the distillate add:

Orange flower water.....	5 pints.
Rose oil	24 drops.
Ambergris	1 grain.
Vanilla	2 ounces.

Macerate for 8 days and filter.

1512. Eau de Bouquet.

Oil lavender	½ dram.
Oil neroli	8 drops.
Oil rose	½ dram.
Oil bergamot	24 minims.
Essence musk	2½ drams.
Essence ambergris	5 drams.
Alcohol	8 ounces.

1513. Eau de Brettfeld.

Digest 230 parts of Florentine orris root with 2,000 parts of cologne spirit for 3 days in a warm place. On the other hand, dissolve 70 drops of oil of lemon, 60 drops of pure oil of rose, 70 drops of oil of neroli (bigarade) in 300 parts of cologne spirit, and digest 0.15 parts of musk in the solution. Finally, mix the two liquids and filter.

1514. Eau de Luce.

Tincture of ambergris...	10½ ounces.
Tincture of benzoin.....	½ pound.
Oil of lavender.....	150 grains.
Water of ammonia.....	1½ pounds.

The tinctures are mixed with the ammonia by agitation, and immediately filled into bottles; the liquid should have a milky appearance. At times 150 grains of white soap is added, which aids in imparting to the liquid the desired milky appearance. In fine Eau de Luce the odor of ambergris should predominate; this can easily be effected by increasing the amount of tincture of ambergris.

1515. Eau de Toilet (Lubin's).

Orris tincture	1 ounce.
Tolu tincture	3 drams.
Musk tincture	12 drops.
Mousseline extract	3 drops.
Lavender oil	16 drops.
Bergamot oil	30 drops.
Clove oil	1 drop.
Ylang ylang oil	5 drops.
Alcohol	2½ ounces.

1516. Eau de vie de Lavande

Double Ambree.

Alcohol, best quality.....	5.18 quarts.
Lavender oil, best quality	3.52 ounces.
French rose geranium oil	0.7 ounces.
Oil of cassia.....	0.88 ounces.
Oil of bergamot.....	0.88 ounces.
Oil of lemon.....	0.88 ounces.
Oil of French petit-grain	0.88 ounces.
Peru balsam	5.29 ounces.
Orris root tincture.....	2.11 quarts.
Ambergris tincture	5.29 ounces.
Musk tincture	0.23 ounces.
Storax tincture	8.81 ounces.
Tolu-balsam tincture.....	5.29 ounces.
Benzoin tincture.....	10.58 ounces.

No water should be added.

1517. Toilet Water.

Oil lavender flowers	
Oil lemon	aa. 2 drams.
Tincture turmeric	
Oil neroli	aa. 1 dram.
Oil balm.....	30 drops.
Oil rose.....	10 drops.
Alcohol	1 quart.
Dilute alcohol	1 quart.

Mix the oils with the alcohol, then with the dilute alcohol. The finished product will mix with water and makes a fine barbers' toilet water.

1518. Carbolic Toilet Water.

Crystallized carbolic acid.	10 parts.
Essence millefleurs	1 part.
Tincture quillaya	
saponaria	50 parts.
Water	1,000 parts.

1519. Eucalyptus Toilet Water.

Balsam Peru	20 minims.
Tincture tolu	80 minims.
Tincture benzoin	80 minims.
Tincture tonka beans	120 minims.
Tincture vanilla	160 minims.
Tincture musk	100 minims.
Oil eucalyptus	30 minims.
Oil neroli	4 minims.
Rose water	6 ounces.
Orange flower water	6 ounces.
Alcohol	20 ounces.

On addition of sufficient glacial acetic acid this will produce a good eucalyptus toilet vinegar.

1520. Florida Water.

Oil lavender	2 ounces.
Oil lemon	1 ounce.
Oil orange peel	1 ounce.
Oil cloves	5 drams.
Deodorized alcohol	1 gallon.

1521. Florida Water.

Oil bergamot	5 ounces.
Oil lemon	3 ounces.
Oil orange peel	2 ounces.
Oil lavender	3½ ounces.
Oil cloves	½ ounce.
Oil cinnamon	½ ounce.
Oil neroli	½ ounce.
Water	1 gallon.
Alcohol	4 gallons.

1522. Florida Water.

Oil lavender	2 drams.
Oil bergamot	2 drams.
Oil lemon	2 drams.
Oil neroli	1 dram.
Tincture turmeric.....	1 dram.
Oil of balm	30 drops.
Otto of roses	10 drops.
Rectified spirit	2 pints.

1523. Florida Water.

Oil lavender	4 fl. ounces.
Oil bergamot	4 fl. ounces.
Oil neroli	2 fl. drams.
Oil orange	4 fl. drams.
Oil cloves	1 fl. dram.
Pure musk	4 grains.
Cologne spirit, 96 degrees.	1 gallon.
Tincture of tonka, sufficient	to color.

Macerate 15 days, and filter through paper.

1524. Florida Water.

Oil bergamot	8 ounces.
Oil orange	4 ounces.
Oil lavender (best)	3 ounces.
Oil cloves	1½ ounces.
Oil cinnamon (true)	¼ ounce.
Tincture of orris	½ pint.
Tincture of Peru balsam..	¼ pint.
Alcohol, 95 per cent.....	4 gallons.
Water	6 pints.

Mix, and allow to stand for several days before filtering and bottling.

1525. Florida Water.

Oil lavender	4 ounces.
Oil bergamot	4 ounces.
Oil cinnamon	2 drams.
Oil cloves	1 dram.
Oil neroli	2 drams.
Musk, pure	4 grains.
Cologne spirits, 95 per cent.	1 scruple.

Macerate 15 days and filter through paper.

1526. Florida Water.

Essence lemon, 6 ounces; oil lavender, 8 ounces; oil lemon grass, 2 ounces; oil cloves, 4 ounces; alcohol, 4 gallons; distilled water, 1 gallon.

1527. Florida Water.

Essence of bergamot	2 drams.
Essence of lemon	1 dram.
Oil of neroli	20 drops.
Oil of origanum	6 drops.
Oil of rosemary	20 drops.
Orange flower water	1 ounce.
Cologne spirit; q. s. to	

make 20 ounces.

Dissolve the essential oils in the alcohol and add the orange flower water. Filter, if necessary.

1528. Florida Water, Cheap.

Oil of lavender	1 ounce.
Oil of bergamot	1 ounce.
Oil of lemon	1 ounce.
Oil of cloves	1 dram.
Oil of cinnamon	1 dram.
Alcohol, best rectified	2 quarts.
Distilled water to make....	6 quarts.

Dissolve the oils in the alcohol and add the water. Let stand for 24 hours, and filter.

1529. Florida Water, Fine.

Oil of lavender	2 drams.
Oil of bergamot	2 drams.
Oil of lemon	2 drams.
Oil of neroli	1 dram.
Tincture turmeric.....	1 dram.
Oil of balm	30 drops.
Oil of rose	10 drops.
Cologne spirits	1 quart.

Mix.

1530. Geranium Water.

Oil of rose geranium.....	1 ounce.
Tincture of orris root.....	1 ounce.
Tincture of musk.....	2 drams.
Alcohol	2 pints.
Rose water.....	4 ounces.

1531. Honey Water.

Oil of cloves.....	2½ drams.
Oil of bergamot.....	10 drams.
English oil of lavender..	2½ drams.
Musk	4 grains.
Yellow sandal wood.....	2½ ounces.
Rectified spirit.....	32 ounces.
Rose water	8 ounces.
Orange flower water.....	8 ounces.
English honey	2 ounces.

Macerate the musk and sandal wood in the spirit 7 days, filter, dissolve the oils in the filtrate, add the other ingredients, shake well, and do so occasionally, keeping as long as possible before filtering.

1532. Hungary Water.

Rosemary 3 parts.
 Lavender 1 part.
 Diluted alcohol 6 parts.
 Water 12 parts.
 Mix, and distill $\frac{3}{4}$.

1533. Hungary Water.

Grape spirit (60 over proof) 1 gallon.
 Otto of Hungarian rose-
 mary..... 2 ounces.
 Otto of lemon peel..... 1 ounce.
 Otto of balm (melissa)..... 1 ounce.
 Otto of mint (m. viridis)... $\frac{1}{2}$ dram.
 *Esprit de rose (triple)..... 1 pint.
 Extract of orange flower.... 1 pint.

*Esprit de rose, triple:

Rectified alcohol 1 gallon.
 Otto of rose..... 3 ounces.

1534. Royal Hungary Water.

Spirit lavender 20
 Spirit sage 20
 Spirit rosemary 60

1535. Lavender Water.

Oil of lavender..... $4\frac{1}{2}$ ounces.
 Tonquin beans..... 7 ounces.
 Oil of bergamot..... 2 ounces.
 Otto of rose..... 160 minims.
 Musk 32 grains.
 Alcohol 3 gallons.

1536. Lavender Water.

Ambergris 12 grains.
 Oil of bergamot..... 6 ounces.
 English oil of lavender... $1\frac{1}{2}$ ounces.
 Oil of cloves..... 6 drams.
 English oil of santal..... 4 drams.
 Otto of rose..... 4 drams.
 Musk 4 drams.
 Alcohol 3 gallons.

1537. Lavender Water.

English oil of lavender.. 16 ounces.
 Oil of bergamot..... 4 ounces.
 Alcohol $4\frac{1}{4}$ gallons.
 Distilled water 5 pints.
 Musk 30 grains.
 Sugar (powdered lump)... 1 ounce.
 Orange flower water..... 5 pints.

1538. Lavender Water.

English oil of lavender..... 3 drams.
 Essence of ambergris (1
 dram in 16 ounces)..... 1 dram.
 Oil of bergamot..... $\frac{1}{2}$ dram.
 Rose water 1 ounce.
 Alcohol 1 ounce.
 Orange flower water..... 1 ounce.

1539. Lavender Water.

English oil of lavender... $2\frac{1}{2}$ drams.
 Oil of bergamot..... $\frac{1}{2}$ dram.
 Musk 10 grains.
 Alcohol 16 ounces.

1540. Lavender Water.

English oil of lavender..... 2 ounces.
 Foreign oil of lavender
 (good)..... 1 ounce.
 Oil of bergamot..... 1 ounce.
 Essence of musk (1 dram
 in 16 ounces) 6 drams.
 Essence of tonquin beans
 (1 in 10) 1 ounce.
 Alcohol 96 ounces.

1541. Lavender Water.

English oil of lavender... 3 ounces.
 Oil of bergamot..... $1\frac{1}{2}$ ounces.
 Essence of tonquin beans
 (1 in 10) 1 ounce.
 Triple rose water..... 12 ounces.
 Alcohol 80 ounces.

1542. Lavender Water.

Musk 40 grains.
 Oil of bergamot..... 1 ounce.
 English oil of lavender... 5 ounces.
 French essence of mille-
 fleur 8 ounces.
 Powdered orris root..... 2 ounces.
 Otto of roses..... 20 minims.
 Essence of ambergris (1
 dram in 16 fluid ounces).. 2 ounces.
 Distilled water 40 ounces.
 Alcohol 6 pints.

1543. Lavender Water.

English oil of lavender.. 10 drams.
 Oil of bergamot..... $1\frac{1}{2}$ drams.
 Essence of musk (1 in 16
 ounces)..... 2 ounces.
 Oil of neroli..... 4 drops.
 Oil of geranium..... 6 drops.
 English oil of sandal
 wood..... 7 drops.
 Alcohol 30 ounces.
 Water 30 ounces.

1544. Lavender Water.

Oil of lavender..... 4 drams.
 Oil of bergamot..... $\frac{1}{2}$ dram.
 Oil of lemon..... $\frac{1}{2}$ dram.
 Musk 2 grains.
 Rose water 2 ounces.
 Alcohol 18 ounces.

1545. Lavender Water, Second.

Oil of lavender (exot).... 2 ounces.
 Essence of musk..... 1 ounce.
 Essence of bergamot..... 1 ounce.
 Essence of ambergris..... $\frac{1}{2}$ ounce.
 Oil of jasmine..... 2 drams.
 Rose water..... 10 ounces.
 Alcohol 3 pints.

1546. Lavender Water.

Oil lavender..... ½ ounce.
 Oil cloves 1½ drams.
 Oil bergamot..... 1½ drams.
 Essence ambergris..... 3 drams.
 Musk 5 grains.
 Tonka bean, contused... 2 drams.
 Orris root, contused.... 2 drams.
 Rose water..... 10 ounces.
 Alcohol 40 ounces.
 Macerate 7 days only and filter.

1547. Lavender Water.

Oil lavender..... 12 drams.
 Oil bergamot..... 4 drams.
 Tincture ambergris..... 4 drams.
 Alcohol 40 ounces.
 Mix and allow to mature.

1548. Lavender Water.

Oil lavender..... 3 ounces.
 Oil bergamot..... 10 drams.
 Oil rose..... 12 minims.
 Oil cloves 10 minims.
 Oil neroli, superfine..... 40 minims.
 Essence ambergris..... ½ ounce.
 Essence musk..... 2 drams.
 Oil of lemon..... ½ dram.
 Spirit nitrous ether..... ½ dram.
 Alcohol 120 ounces.

1549. Lavender Water, English.

Oil bergamot..... 10.0
 Oil lavender..... 20.0
 Oil orange flower..... 2.0
 Spirit ammonia..... 2.0
 Ambergris 0.2
 Musk 0.2
 Lavender flowers..... 30.0
 Alcohol 900.0
 Rose water..... 600.0
 Distill.

1550. Lavender Water, French.

Alcohol 8 gallons.
 Oil of lavender..... 16 ounces.
 Oil of bergamot..... 8 ounces.
 Oil of lemon..... 4 ounces.
 Oil of cloves..... 1 ounce.
 Oil of rose..... 1 ounce.
 Extract of musk..... 8 ounces.
 Extract of ambergris..... 2 ounces.

1551. Lavender Water, White.

Oil lavender (flowers)..... 3 drams.
 Oil calamus..... 6 drops.
 Tincture musk..... 4 drams.
 Cologne splrit..... 1 pint.
 Water 4 ounces.
 Fuller's earth, q. s.
 Filter.

1552. Orange Flower Water.

Take 3 or 4 drops of a fine quality of oil of neroli petals and drop on a small piece of filter paper, say three inches square.

Put the paper into a quart bottle, pour on 4 fluid ounces of warm distilled water, about 100 degrees F., and shake well for a couple of minutes. Then add warm distilled water up to a pint, and shake the whole from time to time till cold. Lastly, filter.

For flavoring purposes the addition of 2 drams of good distilled rose water to each pint of the above.

1553. Lilac Water.

Extract tuberosa..... 1 pint.
 Extract orange flower..... ¼ pint.
 Oil of bitter almonds..... 3 drops.
 Extract of civet..... ½ ounce.

This can be diluted with cologne spirit or a mixture of spirit and water to the desired strength. The peculiar odor of lilac flowers is due to a liquid principle called terpineol which also exists in many of the essential oils. It is obtainable in the market under the name of lilacine. This is probably used in the manufacture of some of the cheaper lilac odors upon the market, either alone or in connection with other ingredients, in alcohol of the required strength.

1554. Violet Water.

Extract violet (from pomade) 2 fl. ounces.
 Extract cassia (from pomade) 6 fl. drams.
 Spirit of rose..... 6 fl. drams.
 Cologne spirit..... 1 pint.

1555. Violet Water.

Extract violet (from pomade) 8 fl. drams.
 Extract cassia (from pomade) 8 fl. drams.
 Spirit of rose..... 4 fl. drams.
 Tincture Florentine orris.. 4 fl. drams.
 Cologne spirit..... 1 pint.

TOILET VINEGARS.

1556. Toilet Vinegar.

Essence of bergamot..... 20 minims.
 Essence ambergris..... 4 drams.
 Essence vanilla..... 30 minims.
 Oil of neroli..... 30 minims.
 Acetic acid (strong)..... 160 minims.
 Alcohol 6 ounces.

1557. Toilet Vinegar.

Balsam Peru..... 5 parts.
 Tincture benzoin..... 25 parts.
 Hoffman's life balsam,
 Alcohol dilute, of each..... 250 parts.
 Rose water..... 150 parts.
 Acetic acid dilute..... 50 parts.

A few drops to be used in the wash water or about 5 teaspoonfuls for the bath.

1558. Vinegar Antiseptic.

Acetic ether.....	8.0
Concentrated acetic acid.....	120.0
Tincture eucalyptus.....	60.0
Cologne water.....	960.0

1559. Aromatic Toilet Vinegar.

Extract of cassia.....	½ pint.
Extract of violet.....	½ pint.
Extract of rose.....	½ pint.
Tincture of orris.....	½ pint.
White wine vinegar.....	2 pints.

Digest for 10 days and filter.

1560. Aromatic Vinegar.

Glacial acetic acid.....	2 pounds.
Camphor	4¼ ounces.
Oil of lavender.....	¾ ounce.
Oil of mace.....	150 grains.
Oil of rosemary.....	150 grains.

1561. Aromatic Vinegar.

Oil cloves.....	1 dram.
Oil lavender.....	40 minims.
Oil citronella.....	40 minims.
Oil bergamot.....	20 minims.
Oil origanum.....	20 minims.
Oil cinnamon.....	10 minims.
Acetic acid, glacial.....	1 ounce.

1562. Aromatic Vinegar.

Tincture benzoin	10.
Tincture tolu	10.
Tincture storax	10.
Acetic acid	50.
Rose water	100.
Cologne water	1,000.

1563. Aromatic Vinegar.

Rosemary	1 ounce.
Sage	1 ounce.
Lavender	1½ ounces.
Cloves	½ dram.
Vinegar	2 pints.

Infuse for 8 days and strain. As a lotion in contusions, sprains, etc.

1564. Aromatic Vinegar.

Glacial acetic acid.....	1 pound.
90 per cent. alcohol.....	2 fl. ounces.
Camphor, pure, crushed small	2½ drams.
Oil of cloves, finest.....	1½ drams.
Oil of rosemary.....	1 dram.
Oil of bergamot.....	½ dram.
Oil of cinnamon.....	½ dram.
Oil of lavender.....	½ dram.
Oil of pimento.....	½ dram.
Neroli, or ess. de petit grain	½ dram.

Mix in a stoppered bottle and agitate until the whole of the camphor is dissolved.

1565. Aromatic Acetic Acid.

Oil of lavender.....	4 drops.
Oil of cloves.....	16 drops.
Oil of cassia.....	8 drops.
Camphor	12 grams.
Acetic acid	120 grams.

1566. Camphorated Acetic Acid.

Camphor	1 part.
Alcohol	1 part.
Acetic acid	9 parts.

1567. Vinegar Benzoin.

Powdered benzoin	100.
Acetic acid	200.
Alcohol	200.

1568. Eucalyptus Toilet Vinegar.

Tincture eucalyptus	60.
Acetic ether	10.
Cosmetic vinegar	1,000.

1569. Floral Vinegar.

Tincture benzoin	2 grams.
Resin storax	2 grams.
Vanilla	2 grams.
Oil orange peel.....	2 grams.
Oil lemon	2 grams.
Oil rose	5 drops.
Oil neroli	10 drops.
Oil cinnamon	10 drops.
Musk	0.1 gram.
Alcohol	100 grams.
Acetic acid	15 grams.
Acetic ether	5 grams.
*White wine vinegar....	250 grams.

*Diluted acetic acid would probably be supplied for this.

1570. Preventive Vinegar.

Benzoin	2¼ ounces.
Lavender	¾ ounce.
Cloves	150 grains.
Marjoram	¾ ounce.
Cinnamon	150 grains.
Alcohol	1 quart.
White wine vinegar.....	2 quarts.

Macerate the solids with the alcohol and vinegar.

1571. Vinegar of Roses.

Rub 15 grains cochineal and 2½ drams burnt alum together, and add a mixture of 5 drops otto of rose, 3 ounces rectified spirit, 1½ ounces acetic acid, 1 dram caramel, 32 ounces distilled water. Agitate, set aside for twenty-four hours, and filter.

1572. Vinalgre Aux Fleurs D'Oranges.

Extract of orange flower..	7 ounces.
White wine vinegar.....	1 quart.

This is usually left colorless.

1573. Spiced Vinegar.**1. Macerate:**

Leaves of geranium, lavender, peppermint, rosemary, and sage, of each.. 1 ounce.
In alcohol of 80 per cent... 1 pound.

2. Macerate:

Angelica root, calamus root, camphor, mace, nutmeg, cloves, of each.. $\frac{1}{2}$ ounce.
In glacial acetic acid..... 2 pounds.

For two weeks, mix the liquids, and filter them into a bottle, which should not be completely filled. The longer this mixture is allowed to season in the bottle, the finer will be the aroma, for in course of time the alcohol and acetic acid react on each other and form acetic ether, which likewise possesses a pleasant aromatic odor.

1574. Vinaigre de Mallard.

Tincture benzoin..... 2 parts.
Tincture balsam tolu..... 2 parts.
Cologne (musk)..... 80 parts.
Mixture oleo-balsamic..... 20 parts.
Dilute acetic acid..... 30 parts.
Rhatany $\frac{1}{4}$ part.

1575. Vinaigre de Quartre Voleurs.

Leaves of lavender.... $3\frac{1}{4}$ ounces.
Leaves of peppermint.. $3\frac{1}{4}$ ounces.
Leaves of rue..... $3\frac{1}{4}$ ounces.
Leaves of rosemary.... $3\frac{1}{4}$ ounces.
Leaves of cinnamon... $3\frac{1}{4}$ ounces.
Calamus 150 grains.
Mace 150 grains.
Nutmeg 150 grains.
Camphor $\frac{5}{8}$ ounce.
Macerated in alcohol... 7 ounces.
Acetic acid..... $4\frac{3}{4}$ pounds.

1576. Vinaigre a la Rose.

Essence of rose (triple).. $10\frac{1}{2}$ ounces.
White wine vinegar..... 1 quart.
This should be colored a pale rose tint to suit.

1577. Vinaigre Aux Violettes.

Extract of cassia..... 8 ounces.
Extract of orange flower $3\frac{1}{2}$ ounces.
Tincture of orris root.... $5\frac{1}{2}$ ounces.
Essence of rose (triple).... $5\frac{1}{2}$ ounces.
White wine vinegar..... 1 quart.

1578. Camphorated Vinegarette.

Camphor 1 ounce.
Alcohol 1 dram.
Glacial acetic acid..... 10 ounces.
Bulk perfume..... 1 ounce.
Rub the camphor with the alcohol to reduce it to a powder, and add the glacial acetic acid, then the bulk perfume.

1579. Toilet Vinegar Hygienic.

Acetic ether..... 2 drams.
Acetic glacial acid..3 ozs., 6 drams.
Tincture eucalyptus..1 oz., 6 drams.
"Eau de cologne"..... 30 ounces.

The eau de cologne for this is made according to the following recipe:

Oil neroli..... 6 drams.
Oil rosemary..... 6 drams.
Oil bitter orange..... 11 drams.
Oil lemon..... 11 drams.
Oil bergamot..... 11 drams.
Triple orange flower water 10 ounces.
Alcohol (58 per cent.)..... 1 gallon.

TOILET POWDERS, PAINTS, ENAMELS, ETC.

1580. Toilet Powder.

Powder of musk rose,
Powder of white rose, each. 50 parts.
Jasmine powder,
Powder of orange flower,
Powder of tuberose,
Powder of jonquil, each.... 25 parts.
Orris powder..... 20 parts.
Clove powder..... 10 parts.
Ambergris 5 parts.
Musk 5 parts.
Finest rice flour..... 500 parts.
Mix thoroughly and sift through silk.

1581. Beauty Powder.

Wheat starch, finest.... 400 grams.
Ultramarine blue..... 2 grams.
Attar of roses..... 1 gram.
Oil of orange flowers.... 50 centigrams.

1582. Blanc de Perle.

Talc 20.0
Bismuth subcarbonate..... 5.0
Barium sulphate, precipitated.... 10.0

1583. Complexion Powder.

Carmin 3 parts.
Solution ammonia (stronger) 6 parts.
Alcohol 4 parts.
Powdered talc..... 700 parts.
Powdered orris root..... 200 parts.
Zinc oxide..... 100 parts.
Acid salicylic..... 10 parts.
Dissolve the carmine in the ammonia; add the alcohol, then the powders; to be thoroughly mixed and the powder exposed to permit evaporation of alcohol and ammonia.

1584. Cuban Belle.

White rose face powder,
Red rose face powder,
of each..... 4 ounces.
Oxford ochre..... 4 drams.
Mix intimately and pass through fine bolting cloth.

1585. Cosmetic Powder, Weisser Haarpuider.

Orris root..... 20.0
Talc 30.0
Starch, wheat..... 50.0

Reduce to a fine powder and mix. Then add

Tincture musk..... 0.5
Oil lemon,
Oil bergamot, of each..... 5 drops.
Oil orange flower..... 2 drops.

1586. Diaphane Powder (Bernhardt's Favorite).

Whitest Venetian talc.... 2 parts.
Rice flour..... 2 parts.
Zinc white..... 1 part.

Mix and perfume with a sufficiency of the following:

Oil of bergamot..... 45 minims.
Oil of ylang-ylang..... 30 minims.
Oil of neroli..... 30 minims.
Eau de cologne..... 5 drams.

The rose-tinted powder is colored with ammoniacal solution of carmine, and perfumed with a mixture of

Oil of bergamot..... 45 minims.
Oil of rose..... 30 minims.
Oil of cinnamon..... 8 minims.
Essence of musk..... 8 minims.
Extract of white rose..... 5 drams.

The yellow-tinted powder is colored with cadmium yellow, or better, with yellow ochre and a trace of carmine, the perfume being this mixture, viz.:

Oil of bergamot..... 45 minims.
Oil of cloves..... 15 minims.
Oil of cedar-wood..... 15 minims.
Oil of patchouly..... 15 minims.
Essence of new-mown hay 5 drams.

1587. Enamel Powder.

Talc or French chalk (finely scraped) 1 part.
Pearl white..... 1 part.
Rouge or carmine (to slightly tinge it), quantity sufficient.

Mix. Used to conceal decolorations, and, without coloring, to whiten the skin.

1588. Face Powder.

Very fine powdered chalk... 1 ounce.
Subnitrate of bismuth..... 1 ounce.
Oil of roses..... 2 drops.

Dust over the surface. This powder is especially adapted for a greasy, shiny, rough or red condition of the skin.

1589. Face Powder.

Powdered oleate of zinc... ½ ounce.
Powdered arrow root..... 1 ounce.
Oil of bergamot or of rose. 3 drops.
Dust over the skin.

1590. Face Powder.

Equal parts of talc, magnesium carbonate, and the finest "crown" zinc white, 1 ounce of the mixture being perfumed with two or three drops oil of orris or attar of rose.

1591. Face Powder.

Talc, 1 pound; extract jasmline, ¾ ounce; extract musk, ¼ ounce; oil rose, 8 drops. Pass through No. 100 sieve.

1592. Face Powder.

Corn starch, 7 pounds; rice flour, 1 pound; powdered talc, 1 pound; powdered orris, 1 pound; extract cassia, 3 ounces; extract jasmine, 1 ounce.

1593. Face Powder.

Oxide zinc, 1 pound; English precipitated chalk, 6 pounds; powdered talc, 1 pound; corn starch, 2 pounds; 1 ounce each of extract white rose, jasmine, orange blossoms, cassia and ¼ ounce extract musk.

1594. Face Powder.

Carbonate of magnesium, ½ pound; pulverized talc, 1 pound; oil rose, 8 drops; oil neroli, 20 drops; extract jasmine, ½ ounce; extract musk, 1 dram.

1595. Face Powder.

Lanolin, anhydrous..... 1 dram.
Starch 1 ounce.
French chalk..... 2½ ounces.
Coumarin 3 grains.
Oil of rose..... 2 minims.

The lanolin and perfume are gradually mixed, the French chalk and then the starch are added.

1596. Face Powder, French White.

Talc 4 pounds.
Oil lemon..... 75 grains.
Oil bergamot..... 75 grains.

The talc must be reduced to finest powder, levigated, dried, then perfumed.

1597. Face Powder, Dry Pearl White.

Venetian chalk..... 20 pounds.
Subnitrate bismuth..... 42 ounces.
Zinc white..... 42 ounces.
Oil lemon..... 1½ ounces.

1598. Face Powder, Poudre Blanche Surfine.

Starch powder..... 20 pounds.
Subnitrate bismuth..... 2 pounds.
Oil lemon..... ¾ ounce.
Oil rose..... 150 grains.

1599. Fairies' Face Powder.

Talc..... 10 drams.
Wheat starch..... 1 dram.
Orris root..... 1 dram.
Oil bergamot..... 1 drop.

1600. Fleur de Lys Face Powder.

Bismuth subnitrate $\frac{1}{2}$ dram.
 Purified talcum $1\frac{1}{2}$ ounces.
 Wheat starch 2 ounces.
 Gypsum 3 ounces.
 Triple extract fleur de lys 1 fl. dram.
 Mix intimately and pass through fine bolting cloth.

1601. Harmless Face Powder, White.

Oxide of zinc..... 30 grams.
 Wheat starch 250 grams.
 Oil of rose..... 3 drops.

1602. Harmless Face Powder, Red.

Carmin 1 gram.
 Carbonate of magnesium... $\frac{1}{4}$ grams.

1603. Imperial Face Powder, White.

Talc (of the finest white grade)..... 38 pounds av.
 English precipitated chalk..... 25 pounds av.
 Powdered carbonate magnesia..... 10 pounds av.
 Oxy-chloride bismuth.. 7 pounds av.
 Corn starch..... 20 pounds av.
 Acid salicylic (true).... 43 grains.
 Oil rose (pure)..... 5 fl. drams.
 Heliotropine $\frac{1}{2}$ ounce av.
 Oil bitter almonds..... 10 drops.
 Triturate oils, heliotropine, salicylic acid with bismuth thoroughly, mix with balance and sift through bolting cloth.

1604. Imperial Face Powder, Pink or Flesh.

Take of the above.... $3\frac{3}{4}$ pounds av.
 Carmine, No. 40..... 1 dram.
 Triturate carmine with a small amount of the powder, gradually adding the balance, and sift thoroughly through bolting cloth.

1605. Imperial Face Powder, Blonde.

Take of the "white" powder..... $1\frac{3}{4}$ pounds.
 Carmine, No. 40..... 5 grains.
 Burnt umber (in fine powder)..... 2 drams.
 Raw sienna..... 2 drams.
 Proceed as with the "pink."

1606. "Invisible" Face Powder.

Zinc oxide 1 pound.
 Precipitated chalk 6 pounds.
 Powdered talc 1 pound.
 Corn starch 2 pounds.
 Extract of white rose..... 1 ounce.
 Extract of jasmine..... 1 ounce.
 Extract of orange flower... 1 ounce.
 Extract of cassia..... 1 ounce.
 Extract of musk $\frac{1}{4}$ ounce.
 If this powder be too light, a portion of the precipitated chalk may be replaced with prepared chalk.

1607. "Invisible" Face Powder.

Carbonate of magnesium.... 1 part.
 Talc 2 parts.
 Perfume and color, if desired.

1608. "Invisible" Face Powder.

Magnesium carbonate $\frac{1}{2}$ pound.
 Powdered talc 1 pound.
 Oil of rose..... 8 drops.
 Oil of neroli 20 drops.
 Extract of jasmine $\frac{1}{2}$ ounce.
 Extract of musk 1 dram.

1609. Nile Lily Face Powder.

Bismuth subcarbonate 2 drams.
 Oxide of zinc (Hubbuck's) 2 ounces.
 Purified talcum $2\frac{1}{2}$ ounces.
 Precipitated chalk $2\frac{1}{2}$ ounces.
 Wheat starch $3\frac{1}{2}$ ounces.
 Oil rose geranium..... 20 drops.
 Mix intimately and pass through a fine bolting cloth.

1610. Pistachio Toilet Powder.

Pistachio meal (in finest powder, and deprived of oil) 10 pounds.
 Talcum 10 pounds.
 Oil lavender $\frac{3}{4}$ ounce.
 Oil rose $\frac{1}{2}$ ounce.
 Oil cinnamon 75 grains.

1611. Poudre Aux Fleurs d'Italie.

Powder of musk roses..... 50 parts.
 Powder of white roses..... 50 parts.
 Jasmine powder 25 parts.
 Powder of orange flower... 25 parts.
 Powder of tuberose..... 25 parts.
 Powder of jonquill..... 25 parts.
 Orris powder 20 parts.
 Clove powder 10 parts.
 Ambergris 5 parts.
 Musk 5 parts.
 Finest rice flour..... 500 parts.
 Mix thoroughly and sift through silk.

1612. Poudre Cosmetique.

Talc 300.00
 Bismuth subchloride 50.00
 Carmine red 0.05
 Oil bergamot 10. drops.
 Oil orange flower..... 2. drops.

1613. Poudre de Riz, Rose.

Corn starch 9 pounds.
 Powdered talc 1 pound.
 Oil of rose 80 drops.
 Extract of musk 2 drams.
 Extract of jasmine 6 drams.

1614. Poudre de Riz, Rose (Cheaper).

Potato starch 9 pounds.
 Powdered talc 1 pound.
 Oil of rose 45 drops.
 Extract of jasmine $\frac{1}{2}$ ounce.

1615. Poudre de Riz (Violet).

Corn starch 7 pounds.
 Rice flour 1 pound.
 Powdered talc 1 pound.
 Powdered orris..... 1 pound.
 Extract of cassia..... 3 ounces.
 Extract of jasmine 1 ounce.

Mix thoroughly and pass through a 100-mesh bolting cloth.

1616. Rose Face Powder.

Rice starch 7 pounds.
 Rose pink $\frac{1}{2}$ dram.
 Otto of rose 2 drams.
 Otto of santal 2 drams.

1617. Rose Cosmetic Powder.

Carmine red 0.3
 Sodium carbonate effloresced. 10.0
 Spirit ammonia 5.0

Mix, then dry and add—

Rice flour 70.0
 Orris root 20.0
 Oil rose 5 drops.

1618. Rose Powder.

Corn starch..... 9 pounds.
 Powdered talc 1 pound.
 Oil of rose 80 drops.
 Extract of musk 2 drams.
 Extract of jasmine 6 drams.

1619. Rose Toilet Powder.

Starch powder 20 pounds.
 Carmine $\frac{3}{4}$ ounce.
 Oil rose $\frac{1}{2}$ ounce.
 Oil santal $\frac{1}{2}$ ounce.
 Oil vetiver 150 grains.

1620. Skin Gloss.

Carbonate potassium .. $1\frac{3}{4}$ ounces.
 Powdered spermaceti .. $1\frac{3}{4}$ ounces.
 Starch powder 1 pound.
 Benzoin $\frac{3}{4}$ ounce.
 Oil bitter almond 150 grains.

Preserve in well-closed boxes. For use, stir some into water.

1621. Skin Powder.

Starch or farina, in fine powder 1 pound.
 Orris root, in fine powder.. $\frac{1}{2}$ to $\frac{3}{4}$ oz.
 Essence of ambergris 10 drops.
 Oil of bergamot 10 drops.
 Oil of rhodium 2 drops.

Mix thoroughly, and rub the whole through a fine gauze sieve; very fine. It should be put up in packets of thin non-porous pasteboard, and packed moderately close to prevent loss of odor.

1622. Toilet Powder (Violet).

Powdered starch 1 pound.
 Powdered orris root 3 ounces.
 Oil of lemon 20 drops.
 Oil of lavender 10 drops.
 Oil of cloves 5 drops.

Triturate well together, and sift through a fine sieve.

1623. Toilet Powder, White.

Fine levigated zinc white $1\frac{1}{4}$ ounces.
 Venetian talcum..... $1\frac{1}{4}$ ounces.
 Carbonate of magnesia.. $1\frac{1}{4}$ ounces.
 Oil rose..... 20 drops.
 Oil orris..... 20 drops.

1624. White Rose Face Powder.

Oxide of zinc (Hubbuck's) 7 ounces.
 Powdered talcum (N. F.).. 9 ounces.
 Carbonate of magnesia.... 1 ounce.
 Triple extract of jasmine 25 drops.
 Triple extract of white rose 10 drops.

Mix intimately and pass through fine bolting cloth.

1625. Cake White (Face Powder).

Oxide of zinc 4, rice starch 4, white French chalk 4, calcined plaster of Paris 1; rub well together, and mix with sufficient water to suitable consistence so that it can be poured out into boxes or paper molds (if in molds, cut to proper size and shape after 5 to 10 minutes).

1626. Rouge en Pate.

Carmine 1 ounce.
 Talcum 21 ounces.
 Gum acacia..... $1\frac{3}{4}$ ounces.

The ingredients in finest powder are mixed in a mortar by prolonged trituration, then water is added in small portions to form a doughy mass, to be filled into shallow porcelain dishes about the diameter of a dollar. If the rouge is desired darker for the use of actors and dark-complexioned persons, the proportion of carmine should be increased.

1627. Rouge Vegetal.

Talcum, pulverized..... 100.0
 Carthamis 10.0
 Absolute alcohol..... 25.0

1628. Rouge Vegetal.

Talcum, pulverized..... 100.0
 Mix with
 Carmine 2.5
 Dissolve in
 Aqua ammonia..... 20.0

After thorough admixture, evaporate off the ammonia and form a dry powder.

1629. Kaloderm.

Wheat flour..... 4 pounds.
 Almond bran..... 1 pound.
 Orris root, fine powder... 1 pound.
 Extract rose..... 1 pint.
 Glycerine 6 fl. ounces.

Form into a dough, which is thinned with water and painted on the skin.

1630. Tannated Talc.

Powdered talc..... 5 pounds.
 Tannic acid..... 4 ounces.
 This is indicated in excoriating and sup-
 purating surfaces.

1631. Tea Rose Talc.

Powdered talc..... 5 pounds.
 Oil of rose..... 50 drops.
 Oil of wintergreen..... 4 drops.
 Extract of jasmine..... 2 ounces.

1632. Toilet Talc.

Powdered talc..... 1 pound.
 Powdered orris root..... 8 ounces.
 Zinc oxide..... 8 ounces.
 Precipitated chalk..... 6 pounds.
 Oil of rose..... 60 drops.
 Extract of jasmine..... 4 ounces.

1633. Baby Powder.

Lycopodium 100 parts.
 Potato starch,
 Venetian talc, of each..... 50 parts.
 Zinc oxide..... 3 parts.
 Salicylic acid..... 0.5 parts.

1634. Baby Powder.

Powdered French chalk.... 14 ounces.
 Powdered boracic acid.... 2 ounces.
 Extract jasmine..... 1½ drams.
 Extract musk..... ½ dram.
 Pass through fine sieve.

1635. Infant Powder.

Zinc oxide, commercial,
 Orris root, of each..... 20.0
 Talc 100.0

1636. Children's Dusting Powder.

Burnt alum..... 15 parts.
 Boric acid..... 15 parts.
 Precipitated chalk..... 150 parts.
 Starch 250 parts.
 Carbolic acid 3 parts.
 Oil of lemon a sufficiency to perfume.
 Mix well.

1637. Antichafe Nursery Powder.

Powdered Fuller's earth... 9 ounces.
 Powdered boric acid..... 1½ ounces.
 Powdered oxide zinc..... 3 ounces.
 Powdered starch..... 9 ounces.
 Powdered orris root..... 1½ ounces.
 Oil bergamot..... 2 drams.
 Mix the powders thoroughly, add the oil,
 and pass through a fine sieve.

1638. O. K. Baby Powder.

Oxide zinc..... ½ ounce.
 Powdered starch..... 1½ ounces.
 Boracic acid..... 20 grains.
 Oil eucalyptus..... 10 drops.
 Mix and rub very fine in a mortar.
 Dust on parts affected, as occasion may
 require.

1639. Nursery Powder (to Cure Chafing).

Gum camphor..... ¼ ounce.
 Carbolic acid..... 15 drops.
 Oxide zinc..... ¾ ounce.
 English precipitated chalk.. 2 ounces.
 Oil of neroli..... 5 drops.
 Oil of rose..... 2 drops.

Rub the camphor to a fine powder in a
 mortar; use alcohol to reduce it, and mix
 the other components thoroughly. Sift
 through a bolting cloth of 100 meshes to
 the inch.

This powder is invaluable for healing
 raw and irritated surfaces and for curing
 sunburn. Mixed in the proportion of 3
 parts of vaseline or cold cream it forms
 one of the most useful domestic remedies
 in the way of a general healing salve that
 can be suggested.

1640. Cntine or Nursery Powder.

Talcum (purified)..... 8 ounces.
 Fuller's earth (powdered).... 4 ounces.
 Lycopodium 4 ounces.
 Oil rose 5 drops.

Rub the oil of rose with the Fuller's
 earth in a mortar until thoroughly incor-
 porated; add the talcum and lycopodium,
 triturate thoroughly.

1641. Pilot's Infant Powder.

Era Prize.

Acid carbolic 50 drops.
 Acid boracic 1½ ounces.
 Powdered French chalk. 14½ ounces.

Triturate the French chalk with the car-
 bolic acid gradually added; then add the
 boracic acid and thoroughly mix them.

1642. Dusting Powder.

Simple lead plaster..... 1 ounce.
 Boric acid ½ ounce.
 Starch in powder..... 10 ounces.

Rub the plaster into a fine powder with
 the other ingredients.

1643. Antiseptic Dusting Powder for Tourists.

Violet powder 8 parts.
 Boric acid 4 parts.
 Salicylic acid 1 part.
 Eucalyptus oil to perfume.

1644. Dusting Powder, Conway's Special.

Zinc oxide 1 part.
 Acid tannic 1 part.
 Lycopodium 6 parts.

In some institutions the following com-
 bination is used:

Zinc oxide 2 parts.
 Tannic acid 2 parts.
 Boric acid 1 part.
 Lycopodium 16 parts.

1645. Lanolin Dusting Powder.

Lanolin anhydrous 5 grams.
 Ether 20 grams.
 Dissolve and rub up with
 Wheat starch 45 grams.
 Allow ether to evaporate,
 then add:
 Boric acid 2 grams.
 Talcum 50 grams.
 Oil of wintergreen..... 1 drop.
 Oleo-balsamic mixture..... 1 drop.

**1646. Dusting Powder, McCall
Anderson's.**

Camphor 3 drams.
 Zinc oxide 4 drams.
 Starch 16 drams.

The powder, after being well triturated,
 should be bolted.

1647. Truss Dusting Powder.

Powdered starch..... 4 ounces.
 Powdered talc..... 2 ounces.
 Dried alum 2 drams.
 Powdered boric acid..... 2 drams.
 Carbolic acid..... $\frac{1}{2}$ dram.
 Oil of lemon..... $\frac{1}{2}$ dram.

1648. Perspiration Powder.

Carbolic acid..... 1 part.
 Burnt alum..... 4 parts.
 Starch 200 parts.
 French chalk..... 4 parts.
 Oil of lemon..... 2 parts.

Make a fine powder to be applied to the
 hands and feet or to be sprinkled inside of
 gloves or stockings.

1649. Barber's Powder.

Salol 1 dram.
 Starch 2 ounces.
 Mix and make a powder.

1650. Shaving Powder.

Powdered soap..... 1.250 kilo.
 Sodium carbonate..... 0.150 kilo.
 Wheat starch..... 0.240 kilo.
 Orris root..... 0.080 kilo.
 Oil bergamot..... 6 drops.

Instead of orris root the same weight of
 powdered quillaja and a very little oil orris
 may be used. An addition of 10-20 grams of
 glycerine will render the powder milder in
 use.

1651. Bath Powder.

Powdered borax..... 4 ounces.
 Salicylic acid..... 1 dram.
 Extract of cassia..... 1 dram.
 Extract of jasmine..... 1 dram.
 Oil of lavender..... 20 minims.

Rub the oil and extracts with the borax
 until the alcohol has evaporated, and put
 into a wooden box.

Use a heaping teaspoonful to the body
 bath, or about $\frac{1}{8}$ teaspoonful for a face
 bath.

1652. Bath Powder, Perfumed.

Powdered borax..... 8 ounces.
 Powdered white castile
 soap 8 ounces.
 Essence of bergamot..... 6 fl. drams.
 Essence lemon..... 3 fl. drams.
 Oil neroli..... 3 fl. drams.
 Oil petit grain..... 8 minims.
 Oil organum..... 30 minims.
 Oil rosemary..... 30 minims.
 Otto rose..... 5 minims.

Mix the powders, add the essential oils,
 and rub together in a mortar. A table-
 spoonful of this added to the bath water
 gives the odor of cologne.

1653. Pasta Mack.

Twenty-seven parts rice starch, 73 parts
 effervescing powder (bicarb. sodium 10, tar-
 taric acid 9.), perfumed and made into tab-
 lets. Used by dissolving in water, thus pro-
 ducing carbonic anhydride, proving very
 refreshing to the skin.

1654. Cosmetic Wash Powder.

Pulverized castile soap..... 400 parts.
 Dry carbonate of sodium.. 33 parts.
 Orris root..... 133 parts.
 Bran of almonds..... 200 parts.
 Oil of bergamot..... 3 parts.
 Oil of lemon..... 1 part.
 Oil of cloves..... 1-5 part.

A small quantity of this powder added to
 water gives it a lather of an agreeable
 odor, which cleanses and softens the skin.

**1655. Held's Washing Powder
for the Hands.**

Mix immediately
 Fine wheat flower..... 500 parts.
 Ordinary pulverized soap. 125 parts.
 Pulverized orris root..... 33 parts.
 Oil of bergamot..... 2 1-2 parts.
 Keep this mixture in a well-closed jar.

In using it take one to two spoonfuls of
 the powder, mix it to a thin paste with
 water and rub the hands with this for
 some time. Then wash them in clean water
 and dry them thoroughly.

**1656. Pate d'Amandes en Poudre Par-
fumee (Pariser Mandelkleie).**

Blanched sweet almonds, pow-
 dered 50.0
 Orris root, powdered..... 150.0
 Talc 250.0
 Sodium carbonate, dried..... 15.0
 Borax 10.0
 Oil bergamot..... 1.5
 Oil lemon pecl..... 0.5
 Oil orange flower..... 0.25
 Tincture musk..... 0.1

LIQUID ENAMELS.

1657. Liquid Enamel.

Precipitated chalk..... 2 drams.
 Bismuth oxychloride... 1½ dram.
 Glycerine ¾ fl. ounce.
 Fluid extract of orris.. ¾ fl. ounce.
 Spirit vanilla..... 20 minims.
 Spirit coumarin..... 10 minims.
 Water 2¼ fl. ounces.
 Similar to Champlain's Liquid Pearl.

1658. Liquid Enamel.

Zinc oxide..... 5 drams.
 Glycerine ½ fl. ounce.
 Alcohol 3 fl. drams.
 Spirit of lavender..... ¾ fl. dram.
 Spirit of bergamot..... ¼ fl. dram.
 Pumice stone, powdered. 2 drams.
 Water 2 fl. ounces.

Ammoniacal carmine solution, q. s.

After mixing the spirit of lavender and bergamot with the alcohol, add the pumice stone and then the water, filter until a clear filtrate is obtained, passing enough 15 per cent. alcohol through the paper to make the filtrate measure 2½ fluid ounces. This may be added to the zinc oxide which should previously have been ground to a smooth paste with the glycerine. Lastly give it a very light pink tint with carmine solution.

Similar to Hagan's Magnolia Balm.

1659. Liquid Enamel.

Zinc oxide 3 drams.
 Precipitated chalk..... 2 drams.
 Spirit of bergamot..... 10 minims.
 Alcohol 3 fl. drams.
 Water 2 fl. ounces.
 Carmine solution, q. s.

Similar to Laird's Bloom of Youth.

1660. Liquid Enamel.

Bismuth oxychloride... 6 drams.
 Glycerine ½ fl. ounce.
 Alcohol ½ fl. ounce.
 Essence of cassia..... 15 minims.
 Essence of violets..... 5 minims.
 Essence of tuberose... 15 minims.
 Water 2 fl. ounces.

1661. Liquid Enamel.

Zinc oxide..... 2 ounces.
 Glycerine 1½ fl. ounces.
 Water 1½ fl. ounces.
 Tincture of balsam of
 Peru 2 minims.
 Tincture of styrax..... 2 minims.

1662. Liquid Enamel.

Zinc oxide..... 2¼ ounces.
 Glycerine 6½ fl. drams.
 Water 2½ fl. drams.
 Spirit of rose..... 5 minims.
 Spirit of rose geranium 15 minims.

1663. Blanc de Perle.

Oxide of bismuth 1 ounce.
 Glycerine 2 drams.
 Rose water 7 ounces.
 Bay rum ½ ounce.
 Mix. Shake before using.

1664. Liquid Pearl Face Wash.

Flake white 6 drams.
 Carmine, No. 40 ½ dram.
 Glycerine 2 drams.
 Rose water 7½ ounces.

Mix in a mortar. Shake before using, and apply with a sponge.

1665. Liquid Pearl Face Wash.

English precipitated chalk. 3 ounces.
 Powdered chalk 1 dram.
 Bay rum 1 ounce.
 Glycerine ½ ounce.
 Extract violet 1 dram.
 Distilled water 1 pint.

Rub the chalk and glycerine to a smooth paste, then add the rest.

1666. Liquid Pearl Face Wash.

Zinc oxide ½ ounce.
 Glycerine 2 ounces.
 Rose water 2 ounces.

1667. For the Lips.

Macerate 1¼ drams carmine, No. 40, in 2 ounces ammonia water in a large bottle for several days. Then add 2½ ounces essence rose triple and 2 quarts rose water, and let stand several days, shaking frequently. Then allow to settle and decant.

1668. Liquid Paint, Eau de Lys.

Zinc white 10 parts.
 French chalk 10 parts.
 Glycerine 20 parts.
 Rose water 1,000 parts.

1669. Liquid Paint, Lait d' Iris.

Bismuth (white) 10 parts.
 Water 120 parts.

Mix. The water is perfumed with essential oil of orris.

1670. Liquid Paint.

Eosin 4 parts.
 Distilled water 80 parts.
 Glycerine 20 parts.
 Eau de cologne 300 parts.
 Spirit (free from fusel oil).. 400 parts.

Dissolve. Allow to stand and filter. According to desire, the proportion of eosin may be increased or diminished, or modified with aniline-orange.

1671. Liquid Paint.

Finest carmine 20 parts.
 Lead white 30 parts.
 French chalk 60 parts.
 Tincture of benzoin (simple) 5 parts.
 Eau de cologne 50 parts.
 Rose water 250 parts.

Mix.

1672. Liquid Paint.

Carmine	4 parts.
Strongest ammonia	4 parts.
Rose water	500 parts.
Essence of rose	15 parts.

This liquid is principally used to give the lips a beautiful cherry-red color.

1673. Bloom of Roses.

Water of ammonia	$\frac{1}{2}$ ounce.
Carmine	$\frac{1}{4}$ ounce.
Rose water	1 pint.
Essence of rose	$\frac{1}{2}$ ounce.
Glycerine	1 ounce.

Use as a liquid face paint.

GREASE PAINTS.**1674. White Face Paint.**

Oxide of zinc, subnitrate of bismuth and plumbate of alumina, of each 1 ounce. Mix, and make into a paste with almond oil (5 to 6 drams required), and perfume with 12 minims of peppermint oil, 12 grains of camphor and a dram of essence bouquet.

1675. Bright Red Face Paint.

Oxide of zinc, subnitrate of bismuth and plumbate of alumina, of each 10 drams; eosin, $2\frac{1}{4}$ grains, dissolve in a dram of essence bouquet, oil of peppermint, 12 minims; camphor, 12 grains; almond oil, sufficient to make a paste. Mix as above.

1676. Deep Bordeaux Red Face Paint.

Oxide of zinc, subnitrate of bismuth, plumbate of alumina, of each 15 drams; oil of peppermint, 12 minims; camphor, 12 grains; carmine, 30 grains (dissolve in 80 minims of solution of ammonia); almond oil, a sufficiency; essence of bouquet, $1\frac{1}{2}$ drams. Mix.

1677. Skin Color Face Paint.

Vermillion, 3 drams; tincture of saffron, 2 drams; powdered orris, 5 drams; precipitated chalk and oxide of zinc, of each 20 drams; camphor, 20 grains; oil of peppermint, 20 minims; essence bouquet, $1\frac{1}{2}$ drams; almond oil, a sufficiency. Mix.

1678. Black Face Paint.

Drop black (made by burning camphor and washing the soot with spirit), 2 drams; oil almond, 2 drams; cocoanut oil, 6 drams. Mix, perfume and cast into sticks.

1679. Flesh Tint Face Paint.

Clarified suet is mixed with the required color and poured into round molds.

Use white lead and chalk, equal parts, and vermillion to suit. Three different tints are required. red, vermillion; blue, ultra-marine; black, finest drop black; white, use white lead; perfume with bergamot.

1680. White Face Paint.

Prepared chalk	80 parts.
Zinc white	80 parts.
Bismuth subnitrate	80 parts.
Asbestos	80 parts.
Oil of sweet almonds, about	50 parts.
Camphor	2 parts.
Oil of peppermint	10 parts.
Extract of essence bouquet..	10 parts.

1681. Pink Face Paint.

Zinc white	1,000 parts.
Bismuth subnitrate	1,000 parts.
Asbestos	1,000 parts.
Oil of sweet almonds,	
about	400 parts.
Camphor	220 parts.
Oil of peppermint	220 parts.
Extract of essence bouquet	100 parts.
Eosin	4 parts.

1682. Flesh Face Paint.

Prepared chalk	200 parts.
Zinc white	200 parts.
Orris root	50 parts.
Cinnabar	30 parts.
Oil of sweet almonds, about	60 parts.
Camphor	3 parts.
Oil peppermint	3 parts.
Tincture of crocus.....	20 parts.
Extract of essence bouquet	15 parts.

1683. Black Face Paint.

Soot	2 parts.
Oil of sweet almonds.....	2 parts.
Cacao butter	6 parts.
Perfume, enough.	

The soot should be derived from burning camphor and repeatedly washed with alcohol.

1684. Red Face Paint.

Carthamini	16 grains.
Talc ven alcohol.....	$2\frac{1}{2}$ drams.
Spermaceti	3 drams.
Ol. amygd. dulc.....	6 drams.

1685. Red Face Paint.

Eosin	16 grains
Cerae alb	2 scruples.
Spermaceti	2 scruples.
Saxolini	$1\frac{1}{2}$ ounces.

1686. Nigger Black Face Paint.

Beat the finest lampblack into a stiff paste with glycerine, and apply with a sponge; if necessary mix a little water with it when using. Easily removed.

1687. Rouge Alloxan (Murexide Paint).

Cold cream.....	1 pound.
Alloxan	75 grains.

Dissolve the alloxan in a little water and mix it intimately with any desired cold cream. The mixture is white, but when

transferred to the skin gradually becomes red. The preparation sold in Austria, etc., under the name of "Schnuda" is identical with this alloxan paint.

1688. French Rouge, Dry.

Powdered soapstone..... 100 parts.
 Carmine, No. 40..... 2½ parts.
 Water of ammonia, 10 per cent 20 parts.

Treat the carmine in a mortar with the water of ammonia. When it is dissolved add the soapstone in small quantities at a time with thorough trituration.

1689. Rouge de Theatre.

Powdered talc..... 5 ounces.
 Precipitated chalk..... 1 ounce.
 Carmine 1 scruple.
 Water of ammonia..... 1 fl. ounce.

Mix the powdered talc and chalk; digest the carmine in the water of ammonia until dissolved; mix the solution with a portion of the powders, and this with the remainder, and dry by exposure to the air.

1690. Fatty Paints in Sticks.

White wax..... 2 parts.
 Olive oil, or almond oil, or suet 3 parts.
 French chalk..... 1 part.
 Zinc oxide..... 1 part.

1691. Fatty Paints in Sticks.

White wax 2 parts.
 Oil or benzoated suet..... 2 parts.
 Bismuth white..... 5 parts.

These are colored red, if desired, with an ammoniacal carmine solution. The proportion of one part of carmine to 40 parts of base is most approved, and the best method of procedure is to dissolve 1 part of carmine in four-eighth parts of strongest ammonia, to mix this solution with six parts of French chalk, and to stir until the ammonia has evaporated and the mixture become dry. This colored chalk is then mixed with a basis made from 13½ parts of wax and 20 of any fixed oil.

SACHET POWDERS.

1692. Sachet Mixture.

Coriander 4 ounces.
 Orris root..... 4 ounces.
 Rose leaves..... 4 ounces.
 Lavender flowers..... 2 ounces.
 Mace ½ ounce.
 Cinnamon ½ ounce.
 Cloves ¼ ounce.
 Calamus 4 ounces.
 Tincture of musk..... 30 minims.

Comminute the solids, sprinkle over them the tincture and inclose in bags, which are to be well sewed.

1693. Carmen Silva Sachet.

Rose leaves..... 50 grams.
 Patchouly powder..... 50 grams.
 Tonka bean in powder.. 30 grams.
 Orris root, powdered... 30 grams.
 Vanilla bean, powdered. 10 grams.
 Vanillin 30 centigrams.
 Heliotropin 30 centigrams.
 Attar of rose..... 20 drops.
 Oil of neroli..... 20 drops.

1694. Clove Pink Sachet.

Orris root 12 ounces.
 Lavender flowers..... 6 ounces.
 Patchouly leaves..... 3 ounces.
 Cloves 1½ ounces.
 Tonka beans 1½ ounces.
 Musk 12 grains.
 Pimento ¾ ounce.
 Otto rose 60 drops.
 Oil neroli..... 60 drops.
 Oil sandal..... 120 drops.
 Oil lavender (English)... 60 drops.

1695. Essence Bouquet Sachet.

For the body of the powder use a mixture of equal parts of orris root, sandal wood, rose leaves and orange peel parenchyma. For every 14 pounds of the mixture, use to perfume the following combination: Tonquin musk, 1 grain; coumarin and vanillin, of each 5 grains; oil of rose, oil of bergamot, of each 2½ fluid drams; oil of neroli, oil of ylang ylang, of each 50 minims; oil of geranium (French), 33 minims; oil of cinnamon, oil of bitter almond, of each 13 minims; splrit of jasmine, 12 fluid ounces.

1696. Essence Bouquet Sachet.

Powdered orris root..... 1 pound.
 Musk 10 grains.
 Otto of rose..... 1 dram.
 Essence of lemon..... 30 drops.
 Essence bergamot..... 2 drams.

1697. Essence Bouquet Sachet.

Orris root..... 4 ounces.
 Sandal..... 4 ounces.
 Rose flowers..... 4 ounces.
 Orange peel..... 4 ounces.
 Musk 2 grains.
 Coumarin..... 4 grains.
 Vanilla 4 grains.
 Oil rose..... 12 drops.
 Oil bergamot..... 12 drops.
 Oil neroli..... 5 drops.
 Oil ylang ylang..... 5 drops.
 Oil geranium..... 4 drops.
 Oil cassia..... 5 drops.
 Oil bitter almond..... 3 drops.
 Extract jasmine..... 1 ounce.

1698. Frangipanni Sachet.

Orris root, powdered..... 1 pound.
 Patchouly leaves, powdered 1 oz. 2 drs.
 Sandal wood..... 1 oz. 2 drs.
 Oil of orange flowers..... 1 drop.
 Otto of rose..... 1 drop.
 Oil of sandal wood..... 1 drop.
 Musk ½ grain.
 Civet 2½ grains.

1699. Frangipanni Sachet.

Pulverized starch..... 25 drams.
 Ground orris root..... 75 drams.
 Ground rose leaves..... 50 drams.
 Ground lavender flowers.. 25 drams.
 Portugal oil..... 5 drams.
 Petit grain oil..... 2½ drams.
 African geranium oil..... 2½ drams.
 Ceylon cinnamon oil..... 1½ drams.
 Musk tincture..... 2½ drams.
 Civet tincture..... 1½ drams.
 Tincture coumarin..... 10 drams.
 Tincture vetivert..... 10 drams.

1700. Frangipanni Sachet.

Orris root..... 4 ounces.
 Rose flowers..... 4 ounces.
 Wild thyme..... 1¼ ounces.
 Sassafras oil..... ¼ ounce.
 Orange peel..... 8 ounces.
 Musk 1 grain.
 Civet 1 grain.
 Coumarin... 3 grains.
 Oil rose..... 6 drops.
 Oil sandal..... 5 drops.
 Oil rose geranium..... 5 drops.
 Oil bitter almonds..... 2 drops.
 Essence jasmine..... 1 ounce.

1701. Geranium Sachet.

Rose geranium leaves 48 parts.
 Orris root 96 parts.
 Rhodium wood 24 parts.
 Gum benzoin 12 parts.
 Oil rose geranium 1 part.

1702. Heliotrope Sachet.

Orris root, powdered 1,000 parts.
 Rose leaves 500 parts.
 Tonka bean 250 parts.
 Vanilla 120 parts.
 Musk 4 parts.
 Oil of bitter almonds..... 3 parts.

1703. Heliotrope Sachet.

Powdered orris root 4 ounces.
 Ground red rose petals ... 2 ounces.
 Ground tonka beans 1 ounce.
 Ground vanilla beans ½ ounce.
 Grain musk 15 grains.
 Bitter almond spirit (5 minims to 1 ounce)..... 40 minims.

1704. Heliotrope Sachet.

Ground lavender flowers.. 50 drams.
 Ground orris root 25 drams.
 Ground rose leaves 25 drams.
 Ground benzoin 10 drams.
 Pulverized starch 50 drams.
 Bergamot oil..... 10 drams.
 Rose geranium oil 2½ drams.
 Oil of cloves 1½ drams.
 Musk tincture 1½ drams.
 Vanilla tincture 12½ drams.
 Extract heliotrope 25 drams.
 Oil of bitter almonds 2 drops.

1705. Jockey Club Sachet.

Orris root 600 parts.
 Sandal wood 100 parts.
 Oil of bergamot 16 parts.
 Oil of rose 1 part.
 Extract of musk 32 parts.
 Extract of civet 16 parts.

1706. Jockey Club Sachet.

For the body: Orris root, rose leaves, of each 57 ounces avoirdupois; orange peel parenchyma, 97 ounces avoirdupois; Sumatra benzoin, 11 ounces; sandalwood, East Indian, 5½ ounces; cloves, 1 ounce. For the perfume: Coumarin, 7 grains; tonquin musk, civet, of each 1 grain; oil of bergamot, 2½ fluid drams; oil of rose, 100 minims; oil of geranium (French), oil of neroli No. 00, of each, 33 minims; oil of cinnamon, oil of bitter almond, oil of ylang ylang, of each, 13, minims; spirit of jasmine (triple extract), 12 fluid ounces.

1707. Lavender Sachet.

Lavender flowers..... 80 parts.
 Benzoin 20 parts.
 Oil bergamot..... 1 part.
 Oil lavender (English)..... 2 parts.

1708. Lavender Sachet.

Lavender flowers..... 128 parts.
 Thyme 8 parts.
 Mint 4 parts.
 Oil of lavender..... 1 part.
 Cloves 4 parts.
 Tincture of ambergris..... 2 parts.

1709. Lily of the Valley Sachet.

Pulverized starch..... 50 drams.
 Ground orris root..... 25 drams.
 Ground lavender flowers 12½ drams.
 Ground rose wood..... 12½ drams.
 Ground vetivert root..... 25 drams.
 Ground benzoin 25 drams.
 Bergamot oil..... 5 drams.
 Wintergreen oil..... 2 drams.
 Ylang-ylang oil..... ½ dram.
 Angelica oil..... ½ dram.
 Bitter almond oil..... 2 drops.
 Storax tincture..... 5 drams.
 Musk tincture..... 1½ drams.
 Extract muguet..... 25 drams.

1710. Marechale Sachet.

Sandal wood.....	300 parts.
Orris root.....	250 parts.
Rose leaf.....	200 parts.
Clove	150 parts.
Cassia	150 parts.
Musk	½ part.

1711. Millefleur Sachet.

Lavender flowers.....	15 parts.
Orris root.....	15 parts.
Rose flowers.....	15 parts.
Benzoin	15 parts.
Tonka bean.....	15 parts.
Vanilla	3 parts.
Santal	5 parts.
Clove	10 parts.
Cardamom	5 parts.
Cassia	5 parts.
Musk	1-5 part.

1712. Musk Sachet.

Orris root	8 ounces.
Musk	8 grains.
Ammonia carb.	3 grains.
Oil rhodium	2 drops.

Rub the musk with ammonia carb. and mix.

1713. Musk Sachet.

Ground musk root.....	50 drams.
Ground exhausted musk sacs.....	50 drams.
Ground lavender flowers..	50 drams.
Ground benzoin	25 drams.
Cassia oil	2½ drams.
Palma rose oil	2½ drams.
Clove oil.....	2½ drams.
Musk tincture	22½ drams.

1714. Orange Sachet.

Ground orange peel.....	100 drams.
Ground lemon peel.....	50 drams.
Ground lavender flowers..	25 drams.
Portugal oil	10 drams.
Neroli oil	1½ drams.
Petit-grain oil	1½ drams.
Bergamot oil	2½ drams.
Musk tincture	1½ drams.
Musk root tincture.....	10 drams.

1715. Oriental Sachet.

Sandal	2 ounces.
Rhodium (wood)	2 ounces.
Cloves	1 ounce.
Cassia	1 ounce.
Orris	4 ounces.
Calamus	4 ounces.
Benzoin	1 ounce.
Myrrh	1 ounce.
Orange peel	4 ounces.
Rose leaves	4 ounces.
Ambrette seed	2 ounces.
Essence ambergris	½ ounce.

1716. New Mown Hay Sachet.

Deer tongue leaves	2 ounces.
Orris root	1 ounce.
Damascene rose petals	1 ounce.
Orange flowers	1 ounce.

The ingredients, in coarse powder, are mixed and sifted.

1717. New Mown Hay Sachet.

Orris root	2,200 parts.
Tonka beans	300 parts.
Vanilla	300 parts.
Oil of bitter almonds.....	1 part.
Oil of rose geranium.....	12 parts.
Oil of rose.....	3 parts.
Oil of bergamot.....	6 parts.
Extract of musk	64 parts.

The solids should be in coarse powder, freshly ground.

1718. Patchouly Sachet.

Ground patchouly leaves..	100 parts.
Ground rose leaves.....	25 parts.
Ground lavender flowers..	25 parts.
Patchouly oil.....	2½ parts.
Oil of cloves.....	1 part.
Bergamot oil.....	2½ parts.
African geranium oil.....	2½ parts.

1719. Portugal Sachet.

Orange peel	40 parts.
Coriander	10 parts.
Cloves	5 parts.
Storax	10 parts.
Benzoin	5 parts.
Ambergris	½ part.
Musk	1-5 part.
Oil cassia	25 drops.
Oil patchouly.....	5 drops.
Oil rose geranium.....	2 parts.

1720. Reseda Sachet.

Ground orris root.....	100 drams.
Ground rose leaves.....	50 drams.
Ground rose wood.....	25 drams.
Clove oil	2½ drams.
African geranium oil.....	2½ drams.
Bergamot oil	2½ drams.
Musk root tincture.....	10 drams.
Vanilla tincture	5 drams.
Musk tincture	1 dram.
Extract reseda.....	25 drams.

1721. Rose Sachet.

Powdered orris	½ pound.
Rose leaves.....	1½ pounds.
Ground sandal wood....	4 ounces.
Patchouly leaves.....	2 ounces.
Extract of civet.....	½ ounce.
Oil of rose geranium....	30 minims.
Otto of rose.....	20 minims.

Break up the leaves, and mix the whole together. The oils and extracts should be mixed with the powders previously.

1722. Rose Sachet.

Ground rose leaves.....	50	drams.
Ground rose wood.....	50	drams.
Pulverized starch.....	50	drams.
Turkish rose oil.....	1½	drams.
Rose geranium oil.....	2½	drams.
Oil of cloves.....	1	dram.
Bergamot oil	2½	drams.
Musk tincture.....	1	dram.

1723. Rose Sachet.

Rose leaves.....	72	parts.
Orris root.....	48	parts.
Rhodium wood.....	48	parts.
Santal wood.....	24	parts.
Benzoin	12	parts.
Brazil wood.....	4	parts.
Otto rose.....	1	part.

1724. Rose Sachet.

Rose flowers.....	250	parts.
Oil rose geranium.....	1	part.
Oil rose.....	1	part.
Essence ambergris.....	10	drops.
Essence musk.....	10	drops.

1725. Vervain Sachet.

Lemon peel.....	16	ounces.
Lemon thyme.....	4	ounces.
Oil lemon grass.....	60	drops.
Oil lemon.....	½	ounce.
Oil bergamot.....	½	ounce.

1726. Victoria Sachet.

Ground lavender leaves..	50	drams.
Ground rose wood,		
Ground rose leaves, of each	25	drams.
Ground orange peel.....	12½	drams.
Ground benzoin.....	25	drams.
Ground vitivert root.....	12½	drams.
Turkish rose oil.....	1	dram.
Bergamot oil.....	2½	drams.
Oil of cloves,		
Oil of verberna, each.....	1	dram.
Musk tincture.....	1½	drams.
Civet tincture.....	1	dram.

1727. Violet Sachet.

Orris root.....	400	parts.
Rhodium wood.....	100	parts.
Rose leaves.....	100	parts.
Black currant leaves.....	100	parts.
Benzoin	4	parts.
Oil of bitter almonds.....	8	parts.
Musk pods.....	8	parts.

The solids should be in coarse powder, freshly ground.

1728. Violet Sachet.

Ground orris root.....	125	drams.
Ground lavender flowers,		
Pulverized starch, of each	50	drams.
Liquid orris root.....	2½	drams.
Sandal wood oil.....	½	dram.
Musk tincture.....	2	drams.
Extract violette.....	25	drams.

1729. Ylang Ylang Sachet.

Orris root	500	parts.
Benzoin	16	parts.
Musk	8	parts.
Oil ylang ylang.....	2	parts.
Oil rose	1	part.

1730. Ylang Ylang Sachet.

Orris root.....	12	ounces.
Rose flowers.....	12	ounces.
Orange peel.....	16	ounces.
Coumarin	2	grains.
Vanillin	4	grains.
Civet	1	grain.
Musk	1	grain.
Oil ylang ylang.....	30	drops.
Oil rose.....	20	drops.
Oil bergamot.....	10	drops.
Essence jasmine.....	1	ounce.

POTPOURRI.

1731. Potpourri.

Rose leaves	4	ounces.
Lavender flowers	8	ounces.
Vanilla	1	dram.
Cloves	1	dram.
Storax	1	dram.
Benzoin	1	dram.
Ambergris	20	grains.
Oil of rose	20	drops.

1732. Potpourri.

Dried rose petals	2	ounces.
Orris	2	ounces.
Pimento	½	ounce.
Cascarilla	¼	ounce.
Musk	2	grains.
Cloves	½	ounce.
Oil of rose	2	drops.

1733. Potpourri.

Lavender flowers	1	pound.
Rose leaves, crushed	1	pound.
Orris root in pieces about the size of a split pea....	½	pound.
Cloves	2	ounces.
Cinnamon	2	ounces.
Allspice	2	ounces.
Table salt	1	pound.

1734. Potpourri.

Yellow sandalwood	3	ounces.
Gum benzoin	½	ounce.
Orris root	3	ounces.
Cloves	½	ounce.
Mace	¼	ounce.
Tonquin beans	½	ounce.
Musk	10	grains.
Oil of rose	10	drops.
Oil of lavender	15	drops.
Oil of bergamot	½	fl. dram.
Oil of lemon	½	fl. dram.

1735. Potpourri.

For mixing with rose leaves: Tonka bean, $\frac{1}{2}$ part; cinnamon, pimento, 1 ounce of each; coriander, 4 ounces; benzoin, 5 ounces; orris root, 1 pound. Reduce to powder, mix, add $\frac{1}{2}$ ounce essence bouquet toward end.

SMELLING SALTS.**1736. Smelling Salts.**

Carbonate of ammonia,
crushed small 1 pound.
Oil of lavender (Mitcham) 1 fl. ounce.
Oil of bergamot 1 fl. ounce.
Oil of cloves 2 fl. drams.
Oil of cassia 1 fl. dram.

Rub them thoroughly together, sublime at a very gentle heat into a well-cooled receiver, and at once put the product into a well-stoppered bottle or bottles. The sublimation may be omitted, but the quality of the product suffers. This is varied, in some samples, by substituting 1 ounce of oil of lemon, or a little of the oils of rosemary and sweet flag (*calamus aromaticus*), for the oils of cloves and cassia; or by adding after sublimation a dash (2 or 3 drops per bottle) of essence of musk or essence of royle.

1737. Smelling Salts.

As before, but taking as perfume—
Oil of bergamot 2 fl. ounces.
Oil of verbena $\frac{1}{2}$ fl. ounce.
Otto of roses 1 to 2 drams.
It is varied as No. 1736.

1738. Smelling Salts.

As No. 1736, but using—
Oil of bergamot $\frac{3}{4}$ fl. ounce.
Oil of lemon $\frac{3}{4}$ fl. ounce.
Essence de petit grain... 3 fl. drams.
Oil of cloves 1 fl. dram.
Oil of cassia 1 fl. dram.
Varied, as before, at will.

1739. Catarrh Smelling Bottle.

Crystallized carbolic acid.. 3 ounces.
Ammonium carbonate..... 2 ounces.
Strong solution ammonia, q. s.
Camphor 3 drams.
Oil eucalyptus..... 3 drams.
Pine wood sawdust, q. s.

Powder the ammonium carbonate, rub down the solids with the sawdust, and drop on the solution of ammonia to make fairly moist.

1740. White Smelling Salt.

Mix in a capacious porcelain mortar 2.2 pounds of ammonium carbonate with 1.1 pound of ammonia, cover the mortar and let it stand quietly. In the course of a few

days the contents have been converted into normal carbonate of ammonia. The latter is reduced to a coarse powder and perfumed with bergamot oil 0.56 dram, lavender oil 0.9, nutmeg oil, clove oil and rose oil, of each 0.28, cinnamon oil 2.82.

1741. Crystallized Smelling Salts.

Fill the bottles with crystals of sulphate of potash; then pour in as much of the following solution as they will conveniently hold:

Strongest ammonia..... 15 ounces.
Oil lavender..... 30 drops.
Oil cloves..... 5 drops.
Essence of lemon..... 1 dram.

1742. Essence for Vinalgrettes.

To be used with pieces of ammonium carbonate:

Alcohol 250 cubic cent.
Oil lavender..... 10 cubic cent.
Oil bergamot..... 12 cubic cent.
Oil cloves..... 5 cubic cent.
Oil cinnamon..... 5 cubic cent.
Oil rose..... 1 cubic cent.
Tincture musk..... 10 cubic cent.
Concentrated ammonia 250 cubic cent.

1743. Inexhaustible Smelling Salts.

Ammonium muriate 8 ounces, potassium carbonate 3 ounces, oil of cloves, cinnamon and rosemary, each 15 drops.

1744. Inexhaustible Smelling Salts.

Oil of bergamot..... 24 grains.
Oil of lavender..... 45 grains.
Oil of mace..... 24 grains.
Oil of clove..... 24 grains.
Oil of rosemary..... 45 grains.
Water of ammonia..... 1 quart.

The aromatics are placed in a bottle, the ammonia is added, and the bottle vigorously shaken; the solution is soon effected, and the turbid liquid can be at once filed into bottles.

1745. Preston Smelling Salts.

Crushed carbonate of ammonia $\frac{1}{2}$ ounce.
Oil rose..... 1 drop.
Oil lemon..... 5 drops.
Oil lavender..... 5 drops.
Oil of cloves..... 3 drops.

Mix and put in smelling bottle.

1746. Pungents.

Powdered chloride of ammonia..... 12 drams.
Powdered carbonate of potassium 14 drams.
Powdered camphor..... 1 dram.
Powdered carbonate of ammonium 3 drams.
Oils of cloves and bergamot, each..... 10 drops.

NAIL POLISHES.

1747. Cera Fortifiant, for the Nails.

Oil of lentise..... $\frac{1}{2}$ ounce.
Salt $\frac{1}{2}$ dram.
Resin..... 1 scruple.
Alum..... 1 scruple.
Wax..... 1 scruple.

Mix together:

Oil of bitter almonds..... 2 ounces.
Oil of tartar..... 2 drams.
Essence of lemon..... 6 drops.

For frequent application when the nails are weak or loosened.

1748. Finger Nail Dressing.

Sulphuric acid..... 5 drops.
Tincture of myrrh..... 1 dram.
Water to make..... 4 ounces.

Mix.

First clean the nails with a stiff brush and soap, and then plunge them into the above mixture and hold them there for five minutes.

1749. Polish for Finger Nails.

Peroxide of tin, 6 ounces, tragacanth, 6 grains; glycerine, 4 drops; rose water, sufficient; mix and make into a paste. Color with ammonia solution of carmine.

1750. Nail Powder.

Oxide tin, very fine..... 4 pounds.
Carmine $\frac{3}{4}$ ounce.
Oil bergamot..... 150 grains.
Oil lavender..... 150 grains.

1751. Nail Polishing Powder (Oleate of Tin).

White castile soap..... 1 part.
Hot water..... 10 parts.

Adding gradually to the liquid a 10 per cent solution of chloride of tin until precipitation no longer occurs. The precipitate is the oleate, which, after washing with water and drying is ready for use. It is sometimes colored with a little carmine to improve the appearance. Any substance used as a polisher for the nails should be exceedingly fine powder, and be carefully employed.

LIP SALVES AND LOTIONS.

1752. Cracks and Irritation Around the Nose.

Sublimed sulphur..... 20 grains.
Camphor 5 grains.
Ointment of oxide of zinc.. 1 ounce.
Apply to the irritated surface.

1753. Chapped Lips.

White wax..... 4 ounces.
Simple cerate..... 3 ounces.
Powdered borax..... $2\frac{1}{2}$ drams.
Rose water 2 ounces.
Oil bergamot..... 25 drops.
Oil clove..... 5 drops.
Oil lavender flowers..... 10 drops.
Color.

1754. Lip Ointment or Salve.

Spermaceti 18 parts.
Yellow wax..... 100 parts.
Almond oil..... 150 parts.
Alkanet root..... 12 parts.
Oil of bergamot..... 2 parts.
Oil of lemon..... 2 parts.
Jasmine pomade..... 4 parts.
Salicylic acid..... 3 parts.
Make an ointment in the usual manner.

1755. Lip Pomatum.

Paraffin.. 80 parts.
Paraffin oil..... 80 parts.
Oil bergamot..... 1 part.
Oil lemon..... 1 part.

Color with $\frac{1}{2}$ part alkannin (or use alkanet root and strain). When melted and colored pour the mass into thick glass tubing about $\frac{1}{2}$ inch internal diameter, and push out with a stick when cold.

1756. Lip Salve.

White vaseline..... 8 ounces.
White wax..... 3 ounces.
Color and perfume.

To give it color use ten grains alkanin, or take about 200 grains alkanet root. If the latter heat it gently over a warm bath until the color is satisfactory. Strain and when cooling add the perfume. This basis for lip salve may be varied as follows:

Cacao butter..... 8 ounces.
White wax..... 1 ounce.

Or,

Benzoinated lard..... 8 ounces.
White wax..... 5 ounces.

Or,

Oil sweet almonds..... 8 ounces.
White wax..... 5 ounces.

Or,

Purified mutton tallow..... 8 ounces.
White wax..... 4 ounces.

And the addition of camphor $\frac{1}{2}$ to 1 ounce.
Or Peruvian balsam.... $\frac{1}{2}$ to 1 ounce.
Or tannic acid..... $\frac{1}{2}$ ounce.

Will give change enough for a new name to suit.

1757. Lip Salve.

White precipitate..... 0.5
Carmine 0.1
Cold cream..... 10.0

1758. Lip Salve.

Spermaceti 40 parts.
 Lard, perfectly pure and
 fresh 80 parts.
 White wax..... 20 parts.
 Oil of sweet almonds... 5 to 10 parts.

According to the season of the year, are melted together, the mixture colored with a sufficient quantity of alkanet, by digesting the root with the melted mass, and the latter then suitably perfumed, for instance, with—

Oil bergamot..... 2 parts.
 Oil orange..... 3 parts.

The mass is then poured into molds. It is customary to pour it into tin tubes, from which it is removed when cold, and then covered with tin foil.

1759. Lip Salve.

Almond oil..... 4½ ounces.
 Spermaceti 6 drams.
 White wax..... 2¼ ounces.
 Carmine 18 grains.
 Balsam of Peru..... 45 drops.
 Otto of rose..... 30 drops.

Melt the spermaceti and wax, add the almond oil, the balsam of Peru, and finally the carmine and otto.

1760. Lip Salve.

Oil almonds, sweet..... 8 ounces.
 White wax 1 ounce.
 Chlorate of potash, powdered 2 drams.
 Carmine 2 grains.

Mix with gentle heat, stir while cooling, and perfume to suit.

1761. Lip Salve.

Cold cream..... 1 ounce.
 Glycerine ½ dram.
 Tincture benzoin..... 20 drops.
 Carmine, quantity sufficient.

Rub the carmine with the glycerine and incorporate with the cold cream; then add the tincture of benzoin and rub the ointment until the alcohol of the tincture has evaporated.

1762. Rose Lip Salve.

Oil of sweet almonds..... 1½ ounces.
 Alkanet root..... 2 drams.
 White wax..... 6 drams.
 Spermaceti 2 drams.
 Otto of rose..... 6 drops.

Heat the oil of almonds and alkanet, and filter through flannel; then melt the wax and spermaceti. When melted, add the filtered oil of almonds to the mixture. Remove from the fire when all the ingredients are thoroughly incorporated; then add the otto. Agitate the mixture with a bone spatula until it is cold.

1763. Rose Lip Salve.

Paraffin 20.0 grams.
 Cacao butter..... 20.0 grams.
 Petrolatum 25.0 grams.
 Eosin 0.05 grams.
 Oil of rose..... 5 drops.

The last two ingredients are dissolved in the least quantity of alcohol and added to the fats after melting.

CHAPPED HANDS, ETC.

1764. Chapped Hands (Vigier's Embrocation).

Tannic acid 50 centigrams; glycerine (30 degrees B.) 20 grams; rose water 200 grams.

1765. Amandine for the Hands.

Almond oil..... 6 to 7 pounds.
 Simple syrup..... 4 ounces.
 White soft soap..... 1 ounce.

Add the perfume oils to 4 pounds of the almond oil. Rub the soap with the syrup until perfectly incorporated, then in a capacious mortar slowly add the perfumed oil and afterward the balance of the almond oil, so long as it will incorporate. It should make a translucent jelly-like mass. Avoid adding oil in excess of what may be needed to attain this condition. The perfume should be almond, but modified by some pleasant mixture.

1766. Chapped Hands.

Green soap..... 1 part.
 Compound benzoin tincture. 4 parts.
 Glycerine 8 parts.
 Rose water..... 16 parts.

1767. Chapped Hands, Sore Nipples.

Tincture benzoin compound 1 ounce
 Glycerine 4 ounces.

1768. Chapped Hands.

Rub gently into the skin every day a mixture of 2 ounces each of glycerine and egg albumen, perfumed with 2 drops of otto of rose.

1769. Chapped Hands.

Quince seed.....½ ounce av.
 Water, q. s.
 Glycerine 1 fl. ounce.
 Alcohol 4 fl. ounces.

Macerate the quince seed with a pint of water for 24 hours, stirring frequently, strain with gentle pressure through muslin, and make up the volume to 1 pint with water; then add the glycerine and finally the alcohol containing the perfume, and stir briskly.

1770. Chapped and Rough Hands.

Glycerine 1 ounce.
 Lime water.....½ ounce.

1771. Chapped Hands.

Glycerine 1 fl. ounce.

Tincture of opium..... 1 fl. ounce.

Apply to hands after washing, night and morning. Also useful for chilblains, chafes, etc.

1772. Chapped and Rough Hands.

Benzoated-zinc ointment.... 1 ounce.

Camphor 5 grains.

Subnitrate of bismuth.....½ dram.

Rose water ointment.....½ ounce.

1773. Chapped and Rough Hands.

Suet, or lanolin..... 1 ounce.

Camphor 20 grains.

Glycerine½ ounce.

Melt the ingredients together, then pour the mixture into some vessel and allow it to cool. Soften a lump of the salve in the palm of the hand, and rub it well into the skin before retiring at night.

1774. Chapped Hands.

Menthol 90 grains.

Salol 120 grains.

Olive oil 120 grains.

Lanolin 12 troy ounces.

1775. Chapped Hands and Lips.

Resin 1 ounce.

White wax 2 drams.

Lard 2 ounces.

Zinc oxide 7 drams.

1776. Glycerine and Cocoa Cream for Chapped Hands.

White wax 14 ounces.

Spermaceti 3 ounces.

Cacao butter 9 ounces.

Castor oil 9 ounces.

Oil of benne 6 ounces.

Melt and mix; then add glycerine, 2 ounces. Perfume to taste. Some prefer petrolatum to oil of benne (sesame oil).

1777. Glycerole for Chapped Hands.

Tincture of benzoin (simple) 1 dram.

Glycerine 2 drams.

White soap 15 grains.

Rose water½ ounce.

1778. Lotion for Chapped Hands.

Glycerine 4 pounds.

Water 1 quart.

Rose water 1 quart.

Color pale red with cochineal.

1779. Ointment for Chapped Hands.

Oxide of bismuth..... 4 grams.

Oleic acid 30 grams.

White wax 12 grams.

Vaseline 36 grams.

Oil of roses..... 2 drops.

Apply the mixture three times a day.

1780. Milk of Roses for Chapped Hands.

Almonds, blanched 1 ounce.

Rose water 8 ounces.

White wax 1 dram.

Almond oil 2 ounces.

White castile soap..... 1 ounce.

Honey 2 drams.

Cologne 1 fl. ounce.

Oil of bitter almonds..... 4 drops.

Oil of rose geranium..... 5 drops.

Glycerine½ fl. ounce.

Blanch the almonds and beat to a paste, adding the rose water; heat this to about 212 degrees, and incorporate with the white wax, almond oil and soap, melted together; then add the other ingredients.

Directions: After washing the hands with warm water and castile or palm soap, apply the milk of roses, rubbing it thoroughly in, then wipe the hands with a dry towel.

1781. Pomade for Rough and Chapped Hands.

Lanolin 600 parts.

Petrolatum 400 parts.

Campho-phenique 40 parts.

Oil of roses..... 2 parts.

Mix, and make into a pomade.

This should be well rubbed over the hands at night before going to bed and left on until morning. After washing and drying the hands in the morning, apply a very small amount to them.

1782. Pomade for Chapped and Cracked Hands.

Campho-phenique 50 parts.

Vaseline or lanolin..... 100 parts.

Mix, and apply two or three times a day.

1783. Almond Cosmetic Paste for the Hands.

Sweet almonds, blanched 24 ounces.

Rice powder..... 4 ounces.

Orris powder..... 4 ounces.

Spermaceti ½ ounce.

Oil almonds..... 2 ounces.

Neutral soap..... 2 ounces.

Oil bitter almond..... 60 minims.

Oil bergamot..... 180 minims.

Oil rose..... 30 minims.

Rose water, a sufficiency.

The first 3 ingredients with enough rose water, are to be beaten into a smooth paste; the spermaceti, oil almond and soap are to be heated and incorporated, then added to the former paste and the perfumes added.

1784. Cream for Red Hands.

Lanolin 10 ounces.
 Vaseline oil..... 3 ounces.
 Vanillin 1 grain.
 Otto of rose..... 5 drops.

Mix.

The cream to be applied to the hands every night.

1785. Soft, White Hands.

Lanolin 2 ounces.
 Vanillin 2 grains.
 Otto of rose..... 1 drop.

1786. White Hands.

Lanolin 4 ounces.
 Liquid paraffin..... 1 ounce.
 Vanillin 2 grains.
 Otto of rose..... 1 drop.
 Fill into collapsible tubes.

1787. Thick Skin on Hands or Feet.

Salicylic acid..... $\frac{1}{2}$ dram.
 Ointment of oleate of lead. $\frac{1}{2}$ ounce.
 Spread on muslin and use on the surface.

1788. Moisture of the Hands.

Chromic acid..... 5 grains.
 Distilled witch hazel..... $\frac{1}{2}$ ounce.
 Especially useful for moist, clammy hands. Drop over the surface several times a day.

1789. Moisture of the Hands.

Oleate of zinc..... 1 dram.
 Subnitrate of bismuth..... 2 drams.
 Beta-naphthol..... 10 grains.
 Dust frequently over the surface.

1790. Moisture of the Hands.

Salicylic acid..... 1 dram.
 Impure carbonate of zinc.... 1 ounce.
 Dust over the surface.

1791. Moisture of the Hands.

Rub the hands several times a day with a mixture of tincture of belladonna, $\frac{1}{2}$ ounce; cologne water, 4 ounces.

1792. Sweating of the Hands.

Rub on the hands, three times a day, a solution of 5 parts each of borax and boric acid, and 15 parts each of salicylic acid and glycerine, in 30 parts of alcohol.

1793. Sweating Hands and Feet.

Use a soap made as follows: On the water-bath melt 15 parts of fat soap, add 1 part of tannin, mix thoroughly and stir in enough starch to effect the right consistency.

COLD CREAMS.**1794. Bear's Grease.**

Hog's lard 1 pound.
 Veal suet 1 pound.
 Olive oil 3 ounces.

Melt, cool a little, and stir in of compound tincture of benzoin 1 fluid ounce.

1795. Bear's Grease.

Soft veal fat 1 pound.
 Palm oil $\frac{1}{2}$ dram.
 Melt and when nearly cold stir in of—
 Nitric ether (genuine)... 2 fl. drams.
 Essence of ambergris 7 or 8 drops.

1796. Bear's Grease (Factitious).

Washed hog's lard (dry).. $1\frac{1}{4}$ pounds.
 Melt it by the heat of a water-bath; add of—

Balsam of Peru 2 drams.
 Flowers of benzoin 1 dram.
 Palm oil (bright)..... 1 dram.

Stir vigorously for a few minutes to promote solution. Then remove the pan from the bath, and after repose for a short time pour off the clear portion from the sediment, and stir the liquid mass until it begins to cool.

1797. Cold Cream.

White wax 3 ounces.
 Spermaceti 3 ounces.
 Almond oil 16 ounces.
 Rose water 8 ounces.

The wax and spermaceti should be cut small and melted in a water-bath. A two-pound jar will do perfectly for that, placing it in a saucepan of boiling water, with a layer of tow at the bottom to prevent the jar being heated too strong. When the solids have melted, add the oil in three or four portions, stirring all the time. Now transfer the mixture to a large Wedgewood mortar, which has been made quite hot by filling with boiling water. Stir the mixture with a bone spatula for ten minutes; then add a portion of the water prescribed, and work it in by stirring constantly, continuing this until the whole of the water has been worked in. It generally requires two or three hours before the preparation assumes the appearance of a thick cream, and during this time it must be stirred constantly. The perfume may now be added, and the cream stirred for a few seconds every five or ten minutes, to prevent its setting hard, which it will do if left alone.

The cream can also be made by melting the solids in a large, wide-mouthed bottle, adding the oil, then the water (hot), and shaking the whole energetically until a thick cream is formed. The cream is brilliantly white.

1798. Cold Cream.

White wax	2½ ounces.
Spermaceti	5 ounces.
Almond oil	16 ounces.
Rose water	6 ounces.
Otto of rose	20 drops.

1799. Cold Cream.

White wax	2 ounces.
Spermaceti	3 ounces.
Almond oil	8 ounces.
Prepared lard	5 ounces.
Water	6 ounces.
Otto of rose	10 drops.
Oil of bergamot	10 drops.

1800. Cold Cream.

Spermaceti	3 ounces.
White wax	3 ounces.
Nut oil	22 ounces.
Rectified spirit	1 ounce.
Water	4 ounces.
Chloroform	10 drops.
Oil of rose geranium.....	30 drops.
Oil of bergamot	6 drops.

1801. Cold Cream.

Lanolin	8 ounces.
Vaseline.....	2 ounces.
Rose water.....	4 ounces.
Vanillin.....	3 grains.
Otto of rose.....	2 drops.

Mix in mortar, without heat.

1802. Cold Cream.

Cotton seed oil, 15 ounces; spermaceti, 3½ ounces, white wax, 3½ ounces; oil of lavender flowers, 12 drops; rose water, 7¾ ounces.

1803. Simple Cold Cream.

White wax.....	5 troy ounces.
Spermaceti...	5 parts.
Oil sweet almonds.....	40 fl. ounces.

Melt together; when nearly ready to congeal whip to a froth, adding gradually a solution of:

Borax	150 grains.
Distilled water.....	8 fl. ounces.

Lastly add

Coumarin.....	1½ grains.
Oil rose.....	45 grains.
Oil neroli.....	15 grains.
Oil rose geranium.....	10 drops.
Oil ylang ylang.....	4 drops.
Oil orris.....	2 drops.
Tincture ambergris (1:10).....	6 drops.

1804. Cold Cream.

White wax.....	4 parts.
Spermaceti.....	5 parts.
Peanut oil.....	32 parts.
Rose water.....	16 ounces.

Melt on a water-bath, and, having removed the bath, stir well until cool.

1805. Cold Cream.

Melt together on a water-bath 4 parts of white wax, 5 parts of spermaceti, 28 parts of oil arachis. Remove from the bath, stir vigorously, add another 4 parts of oil of arachis, then 16 parts of rose water containing 1-6 part of borax dissolved in it. For perfume use a drop of attar of rose to every 2 ounces.

1806. Cold Cream.

Quinccesced mucilage.....	10 drams.
Almond oil soap.....	15 grains.
Stearic acid.....	2½ drams.
Glycerine	½ dram.

Rub the stearic acid and soap together in a warm mortar; add gradually the mucilage, so as to form an emulsion; lastly add the glycerine. It may be perfumed with oil rose, or any perfume desired.

1807. Cold Cream, Improved.

Put 9 drams white wax, 9 drams spermaceti, 7 ounces water, 6 ounces of expressed oil of almonds, and 1 ounce of precipitated chalk into an earthenware vessel, melt by the heat of a water-bath; add 6 ounces more of oil of almonds, and stir until cold. The more stirring the better. When cold add 12 drops of chloroform and otto of rose ad libitum.

1808. Almond Cream.

Cacao butter.....	50 grains.
Olive oil.....	30 grains.
Zinc, white.....	0.5 grains.
Borax	0.5 grains.
Oil bergamot.....	30 drops.

1809. Cold Cream Without Oil.

Quince seed mucilage.....	10 drams.
Almond oil soap.....	15 grains.
Stearic acid.....	2½ drams.
Glycerine	½ dram.

Rub the stearic acid and the soap together in a warm mortar, add gradually to the mixture the mucilage so as to form an emulsion, and lastly the glycerine. The cream may now be perfumed with otto of rose or any suitable essential oil.

1810. Almond Cosmetic Cream.

Almonds, blanched.....	1 ounce.
Rose water.....	4 fl. ounces.
Beat the almonds to a paste and add the rose water; heat to boiling point and add:	
White wax.....	1 ounce.
Almond oil.....	2 fl. ounces.
White castile soap.....	1 ounce.

Mix thoroughly and add:

Solution boric acid, satu- rated	2 fl. ounces.
Cologne water	1 fl. ounce.
Oil bitter almond.....	4 drops.
Oil rose geranium.....	5 drops.
Glycerine	1 fl. ounce.

1811. Almond Glycerine.

Oil sweet almond..... 4 gallons.
(or lard oil.)
Lime water..... 5 gallons.
Saccharated solution of
lime 10 ounces.

Mix the lime water with the solution of lime, and then add one pint of oil, and shake well; repeat this process until the oil is mixed, then add the following:

Oil fennel..... 2 ounces.
Oil sassafras..... 3 ounces.
Oil thyme, white..... 1 ounce.
Oil rosemary..... 1 ounce.
Oil cinnamon, cassia..... 4 ounces.
Oil cloves..... 1 ounce.
Oil lavender..... 1 ounce.

1812. Boro Glycerine Cream.

Oil of sweet almond..... 100 parts.
White vegetable wax..... 125 parts.
Spermaceti 160 parts.
Glycerine 280 parts.
Boric acid..... 12 parts.
Water 500 parts.

Dissolve the boric acid in the glycerine, and mix the solution with the oil, wax and spermaceti. Melt together with a very gentle heat, stirring constantly; when homogeneous, pour into a warm mortar, add the water and beat energetically until it forms a smooth mass. In case it becomes lumpy remelt, and again beat up.

1813. Bromine Cream.

Fine yellow soap..... 1½ pounds.
Almond cream..... 1½ pounds.
Iodine 4 drams.
Bromine 2 drams.
Oil of cloves..... 10 drops.
Oil of caraway..... 10 drops.
Oil bitter almonds..... 1 dram.
Ether 1½ ounces.

Dissolve the iodine and bromine in the ether, beat the soap and cream into a uniform mass, add the ethereal solution, triturate until ether is evaporated, then add perfume.

1814. Cacao Cream.

Oil theobroma..... 16 ounces.
Castor oil..... 96 ounces.
Oil bergamot..... 6 drams.
Oil lemon..... 1½ ounces.
Oil citronella..... 1½ drams.
Oil lavender..... 4 drams.
Cologne spirits, 95 per cent. 64 ounces.

Melt the oil of theobroma, warm the castor oil, and mix. Dissolve the essential oils in the cologne spirits. Fill the bottles ¾ full with the first mixture, and fill the balance of bottle with the perfumed spirit. An elegant dressing for the hair.

1815. Circassian Cream.

Purified lard..... 1 pound.
Benzoin suet..... 1 pound.
French rose pomade..... ½ pound.
Otto of rose..... ¼ ounce.
Mix by heat on a water bath.

1816. Cream Balm.

White wax..... 1 dram.
Paraffin ½ dram.
Oil sweet almonds..... 2 drams.

Adding vaseline and stirring well until cold. Having dissolved in a mortar ½ dram soda nitrate in ½ dram of water, mix the above salve thoroughly with this solution, and finally add:

Oil of lemon..... 10 minims.
Oil of orange..... 2 minims.

1817. Camphor Cold Cream.

White wax 2½ troy ounces.
Spermaceti 2½ troy ounces.
Camphor 1½ troy ounces.
Oil sweet almond..... 16½ fl. ounces.
Distilled water 9 fl. ounces.
Borax 75 grains.
Coumarin 3¼ grains.
Oil of rose..... 22 minims.
Oil geranium, French 5 drops.
Oil ylang ylang..... 5 drops.
Oil bitter almond.... 2 drops.
Oil orris 1 drop.
Tincture musk (1:10).. 10 drops.
Tincture civet 5 drops.

1818. Carbolic Cream.

Sodium borate..... 2 drams.
Rose water..... 2 ounces.
Dissolve, and mix with:
Olive oil..... 8 ounces.
Acid carbolic..... 30 grains.

If cottonseed oil is used, the proportion of borax may be increased so as to produce a creamy mixture.

1819. Cucumber Pomade.

Benzonated lard, 6 pounds; spermaceti, 2 pounds; spirit of cucumber, 1 pound. Melt the spermaceti with the lard, then keep it constantly in motion while it cools. Beat the grease in a mortar, gradually adding the essence of cucumber, continue to beat the whole until the spirit is evaporated and the pomade is beautifully white. Apply by rubbing a little over the skin at bed time.

1820. Cucumber Cream.

White wax 1 ounce avoirdupois, spermaceti 1 ounce, benzonated lard (quantity sufficient) 1 pound avoirdupois, 6 fair-sized cucumbers (those which have not become quite green appear to possess most flavor) peeled and cut in slices, borax sufficient. Melt the wax and spermaceti, add the lard,

and cool, add the cucumbers, stir well, then add 160 grains borax and mix intimately, allow to stand twelve hours, melt over water bath at slowly increased heat, and when melted strain through cheesecloth, place upon ice at once, and when solidified separate it from the water underneath and incorporate 160 grains more of borax. The borax develops more odor and tends to prevent decomposition of the juice while macerating, besides adding to the healing qualities of the ointment. Maceration should not exceed ten hours, nor should more heat than is absolutely necessary be employed during the manufacture.

1821. Glycerine Cold Cream.

White wax.....	5 troy ounces.
Spermaceti	5 troy ounces.
Oil of sweet almond...	43 fl. ounces.
Glycerine	6½ fl. ounces.
Distilled water.....	8 fl. ounces.
Borax	150 grains.
Coumarin	1½ grains.
Oil rose.....	30 grains.
Oil neroli.....	15 grains.
Oil bergamot.....	15 grains.
Oil ylang ylang.....	4 drops.
Oil orris.....	2 drops.
Tincture a m b e r g r i s	
(1:10)	10 drops.

If a rose color is desired, it may be obtained by dissolving in the oil used 6 grains of alkannin.

1822. Glycerine Cold Cream.

Best olive oil (Lucca), or	
best sweet oil of almonds	7 ounces.
Spermaceti	2 ounces.
Pure white wax.....	1 ounce.

Melt in a porcelain dish on a water-bath, strain, if necessary, into another porcelain evaporating dish; stir until it begins to harden a little on the sides of the vessel; then add a warm solution of

Powdered borax.....¼ ounce.

In

Glycerine 2 ounces.

Mix. Add

Oil of rose..... 4 drops.

Oil of bitter almonds..... 4 drops.

If water is desired in the cold cream, take

Powdered borax.....¼ ounce.

Glycerine ½ ounce.

And add, when dissolved,

Distilled rose water.....1½ ounces.

Mix this solution with the fatty substance, and stir until cold.

During winter, ½ ounce of white wax instead of 1 ounce, will be sufficient.

1823. Glycerine Cream.

Ceresin (pure).....	20 grams.
Oil almonds (expressed)....	50 grams.
When liquid, add:	
Medicated soap.....	10 grams.
Rose water.....	20 grams.
Glycerine	20 grams.
Oil rose.....	3 drops.

Make into a bland ointment.

1824. Cream of Glycerine, With Roses.

Oil of sweet almonds....	10 ounces.
White wax.....	2¼ ounces.
Glycerine	1½ ounces.
Otto of rose.....	½ dram.
Tincture of carmine, sufficient to color.	

Melt the wax and oil; add the glycerine. After thorough incorporation, remove from the fire and beat into cream with a spatula. Lastly, add the otto of rose and tincture of carmine.

1825. Glycerine and Cucumber Lotion.

White glycerine soap.....	½ ounce.
Powdered borax.....	2 drams.
Cucumber ointment.....	2 ounces.
Glycerine	1 ounce.
Distilled water.....	32 ounces.
Essence jockey club.....	½ ounce.

Cut the soap small and dissolve in 3 ounces boiling water. Place in a mortar along with the ointment, mix thoroughly, and add borax dissolved in 2 ounces of water. Mix the glycerine and perfume with the rest of the water and add the mixture, an ounce at a time, to the emulsion.

1826. Milk of Cucumbers.

Bruise together in a mortar 100 sweet and 100 bitter almonds, and emulsionize with 1 litre of water. Then melt together 125 grams spermaceti, 125 grams white wax and 125 grams medicinal soap, and add, under constant stirring, 4 liters of water, which should be a little short of boiling when added. This wax emulsion is mixed with the almond emulsion, and 500 grams of alcohol of 95 degrees added thereto. Let stand for several hours, and then strain through flannel, by which latter process the greater portion of separated wax will be gotten rid of. Perfume to taste.

1827. Honey and Almond Cream.

Bitter almond.....	1 ounce.
Yolk of egg.....	1 yolk.
Honey	2 ounces.
Expressed oil of almonds	2 ounces.
Oil of bergamot.....	15 minims.
Oil of lemon.....	12 minims.
Oil of clove.....	12 minims.

Bruise the almond, previously macerated

in cold water, and deprived of its coat, and rub through a fine sieve; add the essential oils and the mixed yolk of egg, honey and almond, and beat all together until they are incorporated.

1828. Honey and Almond Cream.

Oint. rose water, U. S. P... 5 parts.
Oil sweet almond..... 5 parts.
Glycerine 5 parts.
Boric acid..... 5 parts.
Solution of soda, U. S. P... 12 parts.
Mucilage of quince seed, 2
drams to 1 pint..... 25 parts.
Oil of bitter almond and oil
of rose, of each sufficient
to perfume.

Heat the ointment, oil and solution of soda; stirring thoroughly until a uniform mixture or emulsion is produced. Then warm together the glycerine, acid and mucilage and about 150 parts of water. Mix with the emulsion, stir until cold, and make up to 200 parts by adding more water, and finally add the perfume.

1829. Honey and Almond Cream (Withcomb).

Spermaceti ½ ounce.
White wax..... ¼ ounce.
White castile soap..... ¼ ounce.
Bitter almond, blanched.. 5 ounces.
Alcohol 6 ounces.
Oil bitter almonds..... 6 drops.
Oil bergamot..... 1 dram.
Water, distilled..... 1 pint.

Rub almonds with the water, then melt the spermaceti by water bath, mix the two, then add alcohol in which the oils have been previously dissolved, alcohol to be added slowly, strain through cheese cloth.

1830. Lanolin Cold Cream.

White wax 2 ounces avoirdupois, spermaceti 2 ounces, oil of sweet almond 14 fluid ounces. Melt together and add lanolin 6 ounces avoirdupois; stir until nearly cold, adding gradually a solution of borax 75 grains in water 9 fluid ounces. Perfume with:

Oil bergamot..... 15 minims.
Oil rose..... 15 minims.
Oil neroli..... 10 drops.
Oil ylang ylang..... 2 drops.
Oil orris..... 1 drop.
Tincture musk..... 5 drops.
Coumarin ¾ grain.
Vanillin 3 grains.

The coumarin and vanillin should be dissolved in a little oil of sweet almond.

1831. Lanolin Toilet Cream.

Lanolin 4 drams.
Powdered soap 2 drams.
Spirit of bergamot (1 to 16). 2 fl. drams.
Rose water 4 fl. ounces.

1832. Lanolin Toilet Cream.

Lanolin 5 grams.
Oil sweet almonds..... 5 grams.
Precipitated sulphur 5 grams.
Oxide zinc..... 2.5 grams.
Extract violet..... 0.5 grams.
Extract alkanet, q. s. to the desired
tint.

1833. Milk of Roses.

Sweet almonds 8 ounces.
White wax ½ ounce.
Spermaceti ½ ounce.
Powdered white soap..... ½ ounce.
Alcohol 4 ounces.
Otto of rose..... 1 dram.
Distilled water 1 quart.

Pour boiling water on the almonds and blanch them, dry and powder in a warm mortar, add the soap and wax and spermaceti (previously melted), mix well, and gradually add the water (heated nearly to boiling point). Strain with gentle pressure, and when nearly cold, add the otto dissolved in the spirit.

1834. Milk of Roses.

Jordan almonds 1 pound.
Bitter almonds 2 ounces.
Well beaten, when very
fine, add
Spermaceti 1 ounce.
White wax 1 ounce.
Powdered castile soap,
white 1 ounce.
Previously well melted together.

Incorporate them thoroughly with the almonds, and when perfectly smooth add by slow degrees, while beating.

Rose water 5 pints.
Mixed with
Alcohol 20 ounces.
Pass it through a cloth
and add next day:
Alcohol 20 ounces.
Virgin otto of roses..... 1 scruple.

1835. Pomade for Inflammation of the Skin.

Pure lard, 4 pounds; calf suet, 1 pound; juice of cucumbers, 3 pounds. Melt the lard and suet, mix in the cucumber juice and macerate for some time. After fusing for a day or two, decant and add as much of fresh juice. Repeat this operation ten times, always with new juice. When the fat has acquired a perceptible odor of cucumbers, melt over a water-bath, and add to every pound three pounds of starch. Stir well and put up in jars.

1836. Pomade de Nihon.

Oil of sweet almonds..... 4 ounces.
Washed lard 3 ounces.
Juice of houseleek..... 3 ounces.

1837. Prize Cosmetic.

Honey, strained	2 ounces.
White soft soap.....	1 ounce.
Solution of potassa.....	1 fl. dram.
Oil sweet almonds.....	28 fl. ounces.
Oil cloves	40 minims.
Balsam Peru	40 minims.
Oil bergamot	1½ fl. drams.
Oil bitter almond.....	1½ fl. drams.

Rub the honey with the soft soap in a mortar; add the solution of potassa, and when thoroughly mixed gradually add the almond oil, with which the other oils have been previously mixed, stirring thoroughly until a homogeneous cream is formed.

1838. Cream of Roses.

Spermaceti	4 drams.
Oil of sweet almond.....	2 ounces.
White wax.....	1 ounce.
Glycerine	4 ounces.

Melt together the spermaceti, almond oil, and wax, with a gentle heat and add the glycerine with constant stirring. Remove from the fire, perfume with attar of rose, and stir until cold.

1839. Salicylic Cold Cream.

White wax.....	3½ ounces av.
Spermaceti	3½ ounces av.
Oil of almond, ex- pressed	21 ounces av.
Distilled water.....	3½ ounces av.
Glycerine	3½ ounces av.
Salicylic acid.....	154 grains.
Coumarin.....	1 grain.
Oil of rose.....	10 drops.
Oil of neroli.....	10 drops.
Oil of bergamot.....	10 drops.
Wintergreen	5 drops.
Ylang ylang.....	1 drop.
Tincture of musk (1.10)	3 drops.

Add the salicylic acid last, previously triturating it to a smooth paste with the glycerine.

1840. Salicylated Cold Cream.

White wax.....	3 troy ounces.
Spermaceti	3 troy ounces.
Oil sweet almond....	20 fl. ounces.
Distilled water	3 fl. ounces.
Glycerine	2½ fl. ounces.
Salicylic acid.....	144 grains.
Coumarin..	¾ grain.
Oil rose.....	7 grains.
Oil neroli.....	7 grains.
Oil bergamot.....	7 grains.
Oil wintergreen.....	5 drops.
Oil ylang ylang.....	1 drop.
Tincture musk (1.10)	3 drops.

The salicylic acid, rubbed to a fine powder and mixed with a portion of the glycerine, is to be added last.

1841. Vaseline Cold Cream.

Spermaceti	4½ troy ounces.
White wax.....	4½ troy ounces.
Oil sweet almonds..	3 fl. ounces.
Vaseline	12 troy ounces.
Distilled water.....	12½ fl. ounces.
Borax	288 grains.
Coumarin	1½ grains.
Oil rose.....	28 grains.
Oil bergamot.....	28 grains.
Oil rose geranium...	10 drops.
Oil rhodium.....	4 drops.
Oil orris.....	2 drops.
Tincture civet (1.10).	10 drops.

1842. Vaseline Cold Cream.

White wax	75 parts.
Spermaceti	75 parts.
Oil of sweet almonds	450 parts.
Vaseline	200 parts.
Water	200 parts.
Borax	10 parts.
Perfume, q. s.	

1843. Vaseline Cold Cream.

Vaseline	14 ounces.
Paraffin	1 ounce.
Lanolin	4 ounces.
Water	6 ounces.
Otto of rose	5 drops.
Vanillin	4 grains.
Alcohol	2 drams.

CAMPBOR ICES.

1844. Camphor Ice.

Wax	16 ounces.
Spermaceti	16 ounces.
Oil of sweet almonds...	16 fl. ounces.
Glycerine	½ fl. ounce.
Camphor	3 ounces.

1845. Camphor Ice.

Camphor, in powder	2 ounces.
White wax	4 ounces.
Benzoated suet	12 ounces.
Glycerine	½ ounce.
Oil lavender flowers	¼ ounce.
Oil bitter almonds	10 drops.

1846. Camphor Ice.

Pressed lard	24 ounces.
White wax	20 ounces.
Spermaceti	10 ounces.
Camphor	6 ounces.

Melt the wax and spermaceti together by means of a water-bath; then add the lard and camphor, and when the camphor is dissolved pour the mixture into suitable molds. Oil of bitter almonds in the proportion of 1 fluid dram to each pound of camphor ice is a pleasant addition, and should be mixed in at the last moment when the mass is nearly ready to harden, and before it is cast into the molds.

1847. Camphor Ice.

On a water-bath melt 2 ounces of white wax and 16 ounces of spermaceti; add 4 ounces castor oil, and afterwards $1\frac{1}{2}$ ounces camphor. When dissolved, remove the heat, cover the vessel, and when partly cooled stir in 10 minims carbolic acid, 6 minims oil of bitter almonds and 60 grains benzoic acid. Run into suitable molds.

1848. Camphor Ice.

Spermaceti..... 3 ounces.
 White wax..... 4 ounces.
 Oil almonds, expressed.... 8 ounces.
 Camphor..... 4 ounces.
 Oil cajuput..... 40 drops.
 Oil lemon..... 2 drams.

1849. Camphor Ice.

White vaseline..... 8 ounces.
 Hard paraffin..... 5 ounces.
 Camphor..... 2 ounces.

1850. Camphor Ice.

Camphor (fine powder)..... 6 parts.
 White wax, or paraffin..... 25 parts.
 Vaseline..... 69 parts.
 Melt the wax and vaseline, and while cooling but still liquid add the camphor.

1851. Camphor Ice.

White wax..... 22 parts.
 Spermaceti 22 parts.
 Vaseline..... 50 parts.
 Camphor..... 6 parts.

1852. Camphor Ice With Glycerine.

Best quality of stearin
 (stearic acid)..... 8 pounds.
 Best quality fresh lard.... 10 pounds.
 Pure white wax..... 5 pounds.
 Spermaceti..... 5 pounds.
 Melt on a water-bath in an earthen or porcelain dish; strain into a similar vessel; add a solution of 2 ounces powdered borax in 1 pound of glycerine, previously warmed, to the melted substance when at the point of cooling; stir well; add camphor, 2 pounds, powdered, by means of alcohol, 3 fluid ounces; stir well and pour into molds.

1853. Camphor Ice and Glycerine.

White wax..... $7\frac{1}{2}$ ounces.
 Spermaceti..... $7\frac{1}{2}$ ounces.
 Pulverized camphor..... 10 ounces.
 Pure tallow..... 28 ounces.
 Olive oil..... $2\frac{1}{2}$ ounces.
 Glycerine..... 8 ounces.
 Melt the white wax, spermaceti and tallow together, while warm dissolve the camphor in the mixture. Finally, add the olive oil and glycerine. Stir, and pour into molds.

1854. Vaseline Camphor Ice.

White wax..... 5 ounces.
 Paraffin..... 2 ounces.
 Vaseline 8 ounces.
 Camphor..... 2 ounces.
 Glycerine 2 ounces.

Melt the first three, add the camphor, and when dissolved, the glycerine. Mix thoroughly and pour into suitable molds.

POMADES.

1855. Borneic Acid Pomade.

Acid, boracic, pulverized... 6 grains.
 Vaseline 30 grains.

To this may be added 8 minims, or 50 grains, balsam of Peru to give an agreeable odor. The ointment, being antiseptic and non-irritating, may be used for excoriations, fetid perspiration of the feet, etc.

1856. Brilliantine Pomade.

Melt together on a water-bath 6 ounces suet and 4 ounces clear amber resin. While liquid (at about 80 degrees C.) add a solution of 5 ounces caustic soda (40 degrees) in 10 ounces alcohol. Heat in a large vessel until a transparent soap is formed. In another vessel heat eight pounds vaseline in ten pounds castor oil, and add by portions 20 ounces of the soap mass and 3 quarts rectified spirit. Heat the whole till bubbles rise, pour out, color with gamboge, and perfume with 3 ounces oil of sweet orange or any other perfume.

1857. Chafe Pomade.

Lanolin 85 parts.
 Albolin 10 parts.
 Campho-phenique 5 parts.

The directions for use on the label should instruct the purchaser to wash the affected parts with "suds" made of tepid water and white castile soap; to dry them softly with a very soft napkin or old towel, without rubbing; and then to apply the pomade. This should be done on retiring and on getting up in the morning.

1859. Crystallized Pomade.

Olive oil..... 9 ounces.
 Spermaceti 1 ounce.
 Oil of bergamot..... 1 dram.
 Oil of cloves..... 3 drops.
 Oil of cinnamon,
 Oil of neroli, of each..... 5 drops.

Dissolve the spermaceti in the oil by the aid of heat. Place the bottles up to the neck in water as hot as they will bear. Then fill with the pomade, adding the perfume immediately before pouring out. Cover the bottles as soon as they are filled,

and do not disturb them until the pomade is perfectly solid. It may be colored with palm oil or oleaceous annatto coloring. The latter can be made by digesting 1 ounce of the seeds in 8 ounces of olive oil.

1858. Crystalline Pomade.

Melt 6 ounces of spermaceti, add 32 fluid ounces of oil of sweet almonds, and warm together. Then add one-half ounce of essence of lemon, 25 minims of oil of cloves, 2 fluid drams of oil of rose geranium, one-half fluid ounce of oil of bergamot, and cool slowly.

1860. Household Pomade.

Vaseline oil..... 24 ounces.
White cerasine..... 8 ounces.
Melt together, and perfume with
Oil of bergamot..... 80 minims.
Oil of lemon..... 15 minims.
Oil of cloves..... 15 minims.
Oil of bitter almonds..... 30 minims.

1861. Ideal Pomade.

Lanolin 4 ounces, prepared lard 1 ounce, rose water 1 ounce, attar of roses 10 drops.

1862. Lanolin Pomade.

Lanolin 16 ounces.
Oil of theobroma..... 1½ ounces.
Melt together and add:
Tincture of benzoin..... 1 ounce.
Perfume, a sufficiency.
Stir and bottle.

1863. Philicome Pomade.

Wax 10 ounces.
Rose oil 1 pound.
Sweet almond oil..... 1 pound.
Cassia oil,
Jasmine oil,
Tuberose oil, of each..... ½ pound.
Oil of orange, essential.... 1 dram.

Dissolve the wax in the rose and almond oil, and add the other oils as it cools, stirring all the time. ("Oil of jasmine" is an alcoholic tincture made from the pomade.)

1864. Quinine Pomade.

Lard 16 ounces.
Almond oil 4 ounces.
Marrow 20 ounces.
Balsam Peru..... 2 drams.
Powdered cinchona..... 2 drams.
Oil cloves..... 2 drams.
Otto rose..... 20 drams.

Digest the cinchona with the fats over a water bath for twelve hours, strain through muslin, and add the balsam and oils.

1865. Rose Pomade.

Lard 3 pounds.
Spermaceti 3 ounces.
Almond oil 3 ounces.
Otto of rose..... 30 drops.
Oil of rose geranium..... 30 drops.
Oil of bitter almonds..... 30 drops.
Color with alkanet.

1866. Royal Windsor Pomade.

Lard 2 pounds.
Spermaceti 2 ounces.
Wax 1 ounce.
Cassia pomade 4 ounces.
Olive oil 1 pound.
Jasmine oil (French)..... 3 ounces.
Beat up well. Perfume:
Oil of bergamot ½ ounce.
Oil of cloves 1 dram.
Oil of cinnamon (Ceylon).. ¼ ounce.

1867. Strawberry Pomade.

Fresh, ripe strawberries.... 4 parts.
Fresh lard 25 parts.
Fresh tallow 5 parts.
Alkanet root, q. s.
Oil of rose, q. s.

The strawberries are put on a straining cloth, and the lard and tallow previously melted and heated to 100 degrees C. (212 degrees F.) and tinted with alkanet, poured over them. The strained mass is stirred until it begins to set, and for each 2 pounds of product 1 drop of oil of rose added.

1868. Strawberry Pomade.

Suet 15 ounces.
Lard 25 ounces.
Cacao-butter 40 ounces.
Fresh strawberries 13 ounces.
Otto of roses 2 drops.
Oil of neroli 2 drops.

Melt the fats in a water-bath, and introduce the fresh strawberries. The temperature must be kept very low, only high enough to keep the mass liquid, otherwise the strawberry aroma will be lost. After digestion (that is, soaking) for several hours, strain, and when nearly cool add the essential oils.

1869. Transparent Pomade.

Spermaceti 2 ounces.
Castor oil 5 ounces.
Alcohol 5 ounces.
Oil of bergamot ½ dram.
Oil of Portugal ½ dram.

Melt together the spermaceti and castor oil, pour in the alcohol gradually, stop the heat and add the perfume. Stir well and pour into glass jars.

TOILET JELLIES.

1870. Arnica Jelly.

Wheat starch 1 ounce av.
 Distilled water 2 fl. ounces.
 Caustic potassa 9 grains.
 Glycerine 8 fl. ounces.
 Tincture of arnica 13 fl. drams.

Dissolve the potassa in the water, add the starch, mix well, add the glycerine and heat until the starch is cooked. Then stir in the tincture of arnica, and put up while still warm in tin tubes.

1871. Arnica Jelly.

Starch 280 grains.
 Glycerine 4 fl. ounces.
 Water 1 fl. ounce.

Heat until the mass appears transparent. When nearly cold, add:

Tincture of arnica..... ½ dram.
 Oil of rose..... 6 drops.

1872. Arnica Jelly.

Fluid extract of arnica.. 1 ounce.
 Glycerine 6-8 ounces.
 Gelatin 1 ounce.
 Water, sufficient.

Cover the gelatin, contained in a suitable vessel with cold water; allow it to macerate several hours, or until soft and pliable; drain off the excess of water, dissolve by heat in the glycerine, the quantity of which must be varied with the season, using more in the winter than in hot weather. When dissolved add the arnica, perfume to taste, and color with liquid carmine.

1873. Glycerine Jelly.

Gelatin 4 drams.
 Glycerine 6 fl. ounces.
 Triple extract of rose..... 1 fl. ounce.
 Tincture calendula 1 fl. dram.
 Water, quantity sufficient. 1 pint.

Dissolve the gelatin in 6 ounces of water and add the glycerine with the aid of heat; add the tincture of calendula and the triple extract of rose, then add water to make 1 pint. Fill into the container while warm.

1874. Glycerine Jelly.

Gelatin 140 grains.
 Rose water 6 ounces.
 White of egg..... ¾ ounce.
 Glycerine 6 ounces.
 Salicylic acid 12 grains.

Soak the gelatin in the rose water for a few minutes, and dissolve by aid of a water bath; cool and add the white of egg; mix thoroughly and heat until completely coagulated, then add the glycerine and salicylic acid; mix well and filter through a hot water funnel while warm.

1875. Glycerine Jelly.

Tragacanth 60 grains.
 Triple extract of rose..... 6 drops.
 Glycerine 2 fl. ounces.
 Water 4 fl. ounces.

1876. Gelatina Glycerini (Glycerine Jelly).

Mix in a mortar 140 castile soap and 210 glycerine; add, gradually, 1,680 expressed oil of almond (in cold weather only 1,260 will be necessary), and scent with 4 oil of thyme, 8 oil of bergamot, and 2 oil of rose.

1877. Glycerine Jelly (Carbolated).

Isinglass 1 ounce.
 Glycerine 16 ounces.
 Water 3 ounces.
 Carbolic acid..... 1 dram.

Soak the gelatin with the water all night in a gallipot, and next morning place the pot in a sauce pan with water and heat until dissolved. Then add the glycerine and carbolic acid.

1878. Crystal Glycerine Jelly.

Gelatin 2½ parts.
 Glucose 10 parts.
 Glycerine 60 parts.
 Water 27½ parts.

Mix the glycerine and water, and then dissolve in the mixture first the glucose and then the gelatin with the use of a gentle heat; perfume with oil of rose, and place in containers while still warm.

1879. Opaque Glycerine Jelly.

Mix in a mortar 4 ounces of white soft soap with 6 ounces of glycerine; then mix 4 drams of oil of thyme with 4 pounds almond oil, and add this gradually to the glycerine and soap, taking care to incorporate each portion thoroughly before adding the next.

1880. Glycerine Jelly, Plain.

Thin French gelatin..... ½ ounce.
 Water 5 ounces.
 Glycerine of borax..... 10 ounces.
 Triple rose water..... 6 ounces.

Soak the gelatin with the water all night in a gallipot, and next morning place the pot in a saucepan with water and heat until dissolved; then add the glycerine and the rose water. Mix. May be colored with cochineal or a little saffron.

1881. Glycerine Jelly, Transparent.

Take 1 ounce transparent soap, dissolve in 4 ounces water and 4 ounces glycerine by the aid of heat. While still warm, add 20 ounces glycerine, and when nearly cold, perfume and pour into glass jars. This will make a transparent jelly of a pale amber color.

1882. Glycerine Jelly (Solid).

French gelatin.....120 grains.
Glycerine 1½ ounce.
Water ½ ounce.
Otto of rose..... 1 drop.

1883. Rose Jelly.

Flaxseed jelly..... 1 pint.
Glycerine 4 ounces.
Salicylic acid..... 5 grains.
Oil rose geranium q. s. to perfume.

1884. Jelly of Roses.

Finest Russian isinglass.. ⅓ ounce.
Glycerine 2 ounces.
Rose water 6 ounces.
Oil of roses..... 10 drops.

This preparation is usually kept in flexible metallic tubes, and squeezed out in small quantities as used.

COSMETICS CONTAINING NO FAT.

1885. Almond Lotion.

Sweet almond 1 ounce.
Alcohol 1½ ounces.
Glycerine 4 fl. ounces.
Boric acid..... 32 grains.
Tragacanth 40 grains.
Rose water, quantity sufficient.

Mix the glycerine with 11 fluid ounces of rose water and make a mucilage with the tragacanth. Blanch the almonds and emulsify with the glycerine, rose water and tragacanth mixture in three portions of five ounces each, straining after each operation. Add the alcohol containing the boric acid in solution and make the product up to one pint.

1886. Balm for the Skin.

Gum tragacanth..... ½ ounce.
Soft water..... 2 pints.

Mix and let stand for two days; beat up well, strain and add:

Powdered alum..... ½ ounce.
Boracic acid..... 1 ounce.
Glycerine 4 ounces.
Alcohol 6 ounces.
Water 1 pint.

Or enough to make the solution like a cream.

Perfume with any favorite extract.

1887. Bloom of Orient.

Oxychloride of bismuth.... ¼ ounce.
Water 1½ pints.
Rose water..... ½ pint.
Oil of neroli..... 5 drops.
Spirit of sandal wood..... ¼ dram.
Triturate the mixture very thoroughly.

1888. Bloom of Roses.

Pure carmine..... ½ ounce.
Essence white rosc..... 3 fl. ounces.
Solution potash, B. P.... 6 fl. drams.
Water to make..... 20 fl. ounces.

Set aside for a few days, agitating occasionally, finally filter.

1889. Complexion Beautifier.

Diluted nitric acid..... 2 fl. drams.
Alcohol 3 ounces.
Extract of white rose..... ½ fl. ounce.
Oil of neroli..... 10 minims.

Mix and add:

Peroxide of hydrogen..... 2 fl. ounces.
Glycerine 3 ounces.
Tincture of cochineal..... 1 fl. dram.
Water, enough to make.... 40 ounces.

Let the mixture stand three weeks and filter. Wet the corner of a napkin with the lotion, and apply each time after washing, then dry.

1890. Complexion Beautifier.

Aqua ammonia..... 2 parts.
Bay rum..... 2 parts.
Rose water..... 2 parts.
Borax 2 parts.
Glycerine 1 part.
Distilled water..... 16 parts.
Spirits juniper compound... 16 parts.

Mix. If the face be washed with a soft rag dipped in this lotion it will remove tan, freckles, pimples, black-heads, and many other similar face disfigurements.

1891. Clear Complexion Water.

Magnesium sulphate..... 60 grains.
Rose water..... 12 ounces.
Orange flower water..... 4 ounces.

Dissolve the magnesium sulphate in the waters and filter.

1892. Clear Complexion Water.

Sodium borate..... 1 dram.
Boracic acid..... 20 grains.
Any perfumed toilet water.. 1 pint.

1893. Clear Complexion Water.

Mercury bichloride..... 4 grains.
Citric acid..... 1 dram.
Rose water..... 1 pint.

1894. Cosmetic.

Spirits wine..... 30 grams.
Strong vinegar..... 30 grams.
Gum benzoin..... 30 grams.

1895. Cosmetic Water.

Dilute hydrochloric acid,
Dilute nitric acid, of each.. 2 parts.
Rose water..... 200 parts.

For application to pimples, liver spots, etc.

1896. Copland's Aqua Cosmetica.

Emulsion of bitter almonds $3\frac{1}{2}$ fl. ounces.
 Rose water,
 Orange flower water..... $\frac{1}{4}$ pint.
 Borax 1 dram.
 Tincture of benzoin..... 2 fl. drams.

1897. Toilet Cream.

The following two formulas are based on Espey's Fragrant Cream, Funk's Cream of Roses, Helmbold's Jelly of Glycerine and Roses, and some others.

Tragacanth 25 grains.
 Glycerine 1 fl. ounce.
 Alcohol $\frac{1}{2}$ fl. ounce.
 Water $6\frac{1}{2}$ fl. ounces.
 Boric acid..... 40 grains.
 Spirit of lavender..... 1 fl. dram.
 Spirit of bergamot..... 1 fl. dram.

The chief difficulty in the preparation of this cream is in obtaining a perfectly smooth homogeneous mucilage entirely free from lumps. Some care must be exercised in its manufacture.

1898. Toilet Cream.

A somewhat stiffer preparation than the foregoing has been offered to the trade:

Tragacanth..... 1 dram.
 Triple extract of rose... 6 drops.
 Glycerine 2 fl. ounces.
 Water 4 fl. ounces.
 Boric acid..... 60 grains.

1899. Madame Dornier's Liquid Cosmetic.

A liquid intended to be employed before, during, and after massage, and which gives the skin great freshness and suppleness: Four parts each of alum and tan bark, and 8 parts each of anise, thyme, sage, rosemary, hyssop, lavender, absinthium, peppermint and camphor. To be infused 15 days in 1,000 parts of alcohol, 45 degrees, and then filtered.

1900. Face Bleach.

Beta-naphthol 5 grains.
 Glycerine 3 ounces.
 Cologne 3 ounces.

1901. Face Bleach.

Said to resemble Madam Ruppert's.
 Corrosive sublimate 8 grains.
 Tincture benzoin 1 dram.
 Water, quan. sufficient to.. 8 ounces.

1902. Glycerine Cream.

Bitter almonds 1 ounce.
 Sweet almonds 3 ounces.
 Blanch and beat into a paste with 3 drams almond oil and 2 drams powdered

curd soap, gradually add 12 ounces of water, and strain. Then mix the following:

Otto of rose..... 8 drops.
 Oil of neroli..... 3 drops.
 Rectified spirit $1\frac{1}{2}$ ounces.
 Glycerine 2 ounces.
 Water 5 ounces.

Mix with the strained emulsion, and make up to a pint with water. Quince mucilage prevents separation in such emulsions as the above.

1903. Cosmetic Glycerine Paste, Junonia.

Tragacanth, powdered..... 10.
 Rose water..... 20.
 Glycerine..... 50.

Mix and digest on the water bath for 1 hour, after which add to the paste thus formed:

Tincture benzoin 10.0.
 Oil orange flowers..... 5 drops.

1904. Glycerine of Roses, or Fragrant Cream.

Dissolve 24 grains of boric acid in 1 pint of water, macerate with 20 ounces flaxseed for three days, strain, and add 1 pint glycerine, $1\frac{1}{2}$ pints, cologne spirits, $1\frac{1}{2}$ ounces carbolic acid, 2 ounces cologne.

1905. Glycerine of Roses, or Fragrant Cream.

Dissolve 4 grains of boric acid in 4 ounces of rose water, macerate in this solution $1\frac{1}{2}$ drams of cydonium for three hours, strain and press through cloth, add 2 ounces glycerine, 3 ounces alcohol, 2 drams cologne water and sufficient rose water to make 1 pint. Finally add 10 grains carbolic acid and shake well.

1906. Glycerine of Roses, or Fragrant Cream.

Dissolve 4 grains boracic acid in 8 ounces water, bruise $1\frac{1}{2}$ drams quince-seed and macerate in the solution for three hours; strain and press through cloth, add 2 ounces glycerine, 10 grains carbolic acid, 2 ounces glycerite of starch, and mix thoroughly. Then mix 2 fluid drams of cologne water, 20 drops oil of lavender, and 3 fluid ounces of alcohol; add to the mucilage, and again mix thoroughly. Finally make up with water to 1 pint.

1907. Inflamed or Rough Skin.

Boracic acid 1 dram.
 Distilled witch-hazel 2 ounces.
 Rose water 2 ounces.

Use externally.

1908. Inflamed or Rough Skin.

Subnitrate of bismuth 1 dram.
 Powdered arrow root 1 dram.
 Ointment of benzoated oxide of zinc 1 ounce.
 Apply once or twice a day.

1909. Itching of the Skin.

Alum 1 ounce.
 Borax 1 ounce.
 Add 1 pint of hot water to these, and sponge the mixture over the skin.

1910. "Kalydore."

Emulsion of almonds 6 ounces.
 Corrosive sublimate 5 grains.
 Rose water 2 ounces.
 Rub the corrosive sublimate with the water until it is finely divided; add the emulsion; mix them.

1911. Lait Virginal.

Its composition varies, but the following is the most common one:

Tincture of benzoin..... 2 fl. drams.
 Rose water 8 fl. ounces.
 Mix.

It is essential to add the water very gradually to the tincture and with constant stirring to prevent precipitation.

1912. Skin Lotion.

Glycerine 1 ounce.
 Aromatic vinegar, quantity sufficient 16 ounces.
 Tincture cochineal, quantity sufficient.

1913. Borax Lotion.

Powdered borax 1 dram.
 Glycerine 1 ounce.
 Bay rum, quantity sufficient. 4 ounces.

1914. Cooling Lotion.

Alcohol 1 ounce.
 Nitrate potassium..... 4 drams.
 Acetic acid..... 4 drams.
 Camphor water..... 20 ounces.

1915. Face Lotion.

Boric acid..... 1 dram.
 Distilled witch hazel..... 4 ounces.
 Apply to the skin with a piece of old muslin, or with a piece of absorbent cotton.

1916. Face Lotion.

Corrosive sublimate..... 8 grains.
 Glycerine 2 ounces.
 Distilled witch hazel..... 2 ounces.
 Apply to the skin with a sponge, or a piece of soft, old muslin. This is an excellent lotion for greasy, shiny and rough complexions.

1917. Glycerine Lotion.

Glycerine 6 ounces.
 Rose water..... 2 ounces.
 Zinc oxide..... 1 dram.
 Tincture benzoin..... ½ dram.

1918. Glycerine Lotion.

Mucilage of flaxseed..... 8 fl. ounces.
 Glycerine 8 fl. ounces.
 Alcohol..... 2 fl. ounces.
 Essence of rose..... ½ fl. ounce.
 Borax..... 2 drams.
 Rose water, sufficient to

make..... 32 fl. ounces.

The proportion of flaxseed used in making the mucilage is not indicated in the recipe; a preparation about the consistence of the pharmacopoeial mucilage of acacia is presumably what is required.

A much simpler form is to simply dissolve glycerine in rose water or other perfumed water in the proportion of about 1 part to 20. When glycerine is used undiluted as an emollient it causes a sticky feeling, which is quite unpleasant. This is due to the quantity ordinarily adhering from such use; when diluted, such excess is avoided and the result is much more satisfactory.

1919. Glycerine Lotion.

Prepared by simmering 1 dram of quince seed in ½ pint boiling water for ten minutes, straining the mucilage and mixing 1 part with 1 part of inodorous glycerine, and 6 parts of orange flower or rose water. A little borax may be added, if desirable.

1920. Glycerine Lotion, German.

0.3 gram of cochineal is beaten up in a mortar with 45 grams of boiling water, which is added to it gradually in small quantities at a time. Next 75 grams of alcohol (rectified spirit) are added. This constitutes one-half of the preparation. On the other hand an emulsion is made of 8 drops of otto of rose, 2 grams of gum arabic, and 240 grams of water, to which is added 90 grams of pure glycerine and then 40 grams of quince mucilage. The two preparations are next carefully mixed and bottled in clean stoppered bottles ready for use. The bottles should be kept full and in a cool place where they are not exposed to the sun's rays. This is an elegant and useful preparation when the instructions above given are scrupulously carried out.

1921. Goddard's Cosmetic Lotion.

Tincture benzoin 2 drams.
 Bichloride mercury 6 grains.
 Rose water 6 ounces.

1922. Lehmann's Cosmetic Lotion.

Oil of camphor, 100 minims; powdered gum arabic, 100 grains; rose water, $3\frac{1}{4}$ fluid ounces; orange flower water, 2 fluid ounces; make an emulsion of the foregoing and add ammonium hydrochlorate, 20 grains; corrosive sublimate, 5 grains; 50 minims acetate of lead solution, 60 minims spirits nitrous ether, 35 minims tincture benzoin.

1923. May Dew Lotion.

Distilled water 5 ounces.
Powdered borax 1 dram.
Glycerine $\frac{1}{2}$ ounce.
Sulphite sodium 2 drams.
Rose water enough
to make 10 ounces.

1924. Lotion for Chapped Nipples.

Balsam of Peru, 2 grams; tincture of arnica, 2 grams; sweet oil of almonds, 30 grams; lime water, 15 grams. Mix. To be applied to the nipple on the removal of the baby from the breast.

1925. Lotion for Pimples.

Sulphocarbolate of zinc... 2 drams.
Orange flower water..... 3 drams.
Alcohol $\frac{1}{2}$ ounce.
Rose water..... 4 fl. ounces.
Use every night before retiring.

1926. Pimple Lotion.

Carbolic acid..... 1 dram.
Borax 4 drams.
Glycerine 2 fl. ounces.
Tannin 2 fl. drams.
Alcohol 3 fl. ounces.
Rose water..... 10 fl. ounces.
Mix and dissolve. Apply night and morning.

1927. Skin Lotion.

Glycerine 4 ounces.
Cologne 2 ounces.
Borax 2 ounces.
Alcohol 2 ounces.
Camphor water..... 20 ounces.

1928. Lotion to Prevent Chapping of the Skin.

Oil of rose..... 15 drops.
Oil of cajuput..... 20 drops.
Glycerine 1 fl. ounce.
Bay rum 3 fl. ounces.
To be used on the hands every night before going to bed, and in cold weather to be applied before going out in the open air, the hands being first washed and dried.

1929. Lotion for Sunburn.

Citric acid..... 2 drams.
Pure sulphate of iron..... 18 grains.
Camphor 2 grains.
Elder flower water..... 3 ounces.

1930. Menthol Cream.

Tragacanth 6 parts.
Warm water..... 576 parts.
Glycerine 18 parts.
Alcohol 24 parts.
Menthol 1 part.

This cream is applied as a cooling lotion, having first been diluted with some aromatic water.

1931. Oriental Cosmetic.

Powdered tragacanth..... 5
Glycerine 225
Mix and place in a water-bath for 1 hour. Then add:
Borax 5
Dissolved in
Rose water 25
When partially cool, add
Oil rose..... 1 drop.

1932. Toilet Cream.

Quince seed..... 2 ounces.
Rose water..... 4 pints.
Glycerine 2 pints.
Tincture benzoin..... 2 ounces.
Macerate the quince seed in the rose water for 24 hours, strain, and add the glycerine and tincture of benzoin.

1933. Toilet Cream.

Dissolve 60 grains of salicylic acid in 2 pints of soft water, add $1\frac{1}{4}$ ounces of best tragacanth, 1 pint of glycerine and 5 pints of water, placing the whole in a 2-gallon jar. Cover and let remain a few days, stirring occasionally and working well until a muclage is formed free from lumps. Finally add $\frac{1}{2}$ ounce of any good handkerchief extract, and squeeze two or three times through muslin until smooth.

1934. Winter Cream.

Sweet almonds..... 1 ounce.
Bitter almonds..... 2 drams.
Quince mucilage..... 6 ounces.
Glycerine $1\frac{1}{2}$ ounces.
Carbolic acid..... 1 dram.
Essence bouquet..... 3 drams.
Water to make..... 16 ounces.
Blanch the almonds, bruise, and emulsify with 8 ounces of water. To this add the other ingredients in the above order, dissolving the acid in the essence bouquet.

1935. Transparent Cosmetic.

Transparent soap..... 8 ounces.
Glycerine $\frac{1}{2}$ ounce.
Water 1 ounce.
Mucilage of acacia..... $\frac{1}{2}$ ounce.
Otto of rose..... 5 drops.
Oil of cinnamon..... 10 drops.
Oil of lemon..... 20 drops.
Cut the soap (which should be one of the common soft brands) into shavings, and

heat on a water-bath, along with the water, glycerine and mucilage. Stir constantly, adding water if, on testing a little of the cooled mass, it is found to be too hard. Then add the perfumes, mixed with a dram of spirit, and cast into sticks.

BALDNESS.

1936. Baldness.

Fluid extract jaborandi.... 1 ounce.
Tincture cantharides..... ½ ounce.
Soap liniment..... 1½ ounces.
Mix. Rub on the scalp once daily.

1937. Baldness.

Tincture nux vomica..... 4 drams.
Tincture cantharides..... 2½ drams.
Lanolin 2½ drams.
Acetic acid..... 4 drams.
Rose water..... 6 ounces.
Mix, and use as a lotion.

1938. Baldness.

Fluid extract of pilocarpus. 1 ounce.
Soap liniment..... 3 ounces.
Rub thoroughly into the scalp night and morning.

1939. Baldness.

Tincture of capsicum..... 2 drams.
Water of ammonia..... 1 ounce.
Pilocarpine hydrochlorate.. 5 grains.
Cologne 3 ounces.
Use on the scalp twice a day.

1940. Baldness.

Alcohol (80 degrees)..... 20 drams.
Camphorated alcohol..... 4 drams.
Rum 2 ounces.
Tincture cantharides..... 4 drams.
Glycerine 4 drams.
Essence santal..... 5 drops.
Essence wintergreen..... 5 drops.
Essence laurel roses..... 5 drops.
Pilocarpine muriate..... 8 grains.

This mixture is gently rubbed on the scalp once a day.

1941. Baldness.

Ointment of 10 per cent oleate of mercury..... ½ ounce.
Lanolin, or prepared suet.. ½ ounce.
Rub well into the scalp.

1942. Baldness.

Resorcin ½ ounce.
Glycerine,
Bay rum, each..... 4 fl. ounces.

1943. Baldness.

Acid salicylic..... 1 dram.
Resorcin 2 drams.
Lanolin 6 drams.
Benzoated lard 2 drams.

1944. Baldness.

1. The scalp should be lathered well with a strong tar soap for ten minutes. 2. This lather is to be removed with lukewarm water, followed by colder water in abundance; then the scalp is to be dried. 3. A solution of bichloride of mercury, 1 to 900, the menstruum being equal parts of water, glycerine, and cologne or alcohol, is to be rubbed on. 4. The scalp is then rubbed dry with a solution containing betanaphthol, 1 part, and absolute alcohol, 200 parts. 5. The final step in the process is an anointing of the scalp with an unguent containing two parts of salicylic acid, three parts of tincture of benzoin, and 100 parts of neat's-foot oil. This treatment should be persisted in for a period of six weeks or longer.

1945. Bald Patches.

"Barber's Itch" frequently produces bald patches on the place where the beard and mustache ought to grow. The following has been astonishing in its efficacy:

Chloral hydrate..... 2 parts.
Tincture cantharides..... 2 parts.
Distilled water, to..... 8 parts.
Lightly paint on the affected parts twice a day.

BANDOLINES.

1946. Bandoline.

Quince seed, ¼ of a teaspoonful; linseed, 1 tablespoonful, and add a pinch of white mustard seed. Boil in a pint of soft water to half a pint, and scent with oil of almonds.

1947. Bandoline.

Isinglass, 1 ounce; water, 1 pint; proof spirit, 2 fluid ounces. Dissolve the isinglass in the water by heat, add the spirit, and scent with almond oil.

1948. Bandoline.

Gum tragacanth..... 1½ drams.
Water, distilled..... 7 ounces.
Proof spirit..... 3 ounces.
Otto of rose..... 10 drops.

Macerate the gum in the water until completely dissolved, strain and add the spirit with the otto previously dissolved in it. If a rose-colored bandoline be required, a few drops of cochineal color should be added to the spirit.

1949. Bandoline or Fixateur.

Boil Iceland or Irish moss in water, strain, and perfume the fluid.

1950. Bandoline or Fixateur.

Boil for five minutes 1 tablespoonful of flaxseed in 1½ pints of water.

1951. American Bandoline.

Quince seed..... 2 drams.
 Glycerine 4 drams.
 Rose water..... 4 ounces.
 Distilled water..... 3 ounces.
 Alcohol 1 ounce.

Macerate the seeds in the water for 24 hours, and strain out the mucilage with gentle pressure. Add the glycerine and alcohol.

1952. Rose Bandoline.

Gum tragacanth..... 8 ounces.
 Rose water..... 6 pints.
 Orange flower water..... 2 pints.
 Salicylic acid..... 16 grains.
 Alcohol 2 drams.
 Oil of rose..... 1 dram.
 Extract of musk..... 5 drops.
 Oil of wintergreen..... 5 drops.

Shade a delicate pink with carmine solution.

Let the tragacanth stand 24 hours in the water, and strain through muslin; add the salicylic acid dissolved in the alcohol, and the remaining perfumes with thorough admixture.

BAY RUM.**1953. Bay Rum.**

Oil of bay..... 2 drams.
 Oil of pimento..... 20 drops.
 Carbonate of magnesium.. ½ ounce.
 Alcohol 2 pints.
 Water 2 pints.

Tincture of grass, sufficient to color.
 Mix them, shake, and filter.

1954. Bay Rum.

Rum..... 1 gallon.
 Bay oil..... 1 ounce.
 Acetic acid..... ½ ounce.
 Alcohol 8 ounces.
 Caramel, sufficient.

Dissolve the oils in the alcohol, and add to the rum; color with caramel, and filter.

1955. Bay Rum.

Alcohol..... 8 ounces.
 Oil of bay..... 40 drops.
 Oil of mace..... 1 grain.
 Oil of orange..... 20 drops.
 Jamaica rum..... 1 ounce.
 Water enough to make.... 16 ounces.

Digest two or three weeks, and filter through magnesia.

1956. Bay Rum.

Oil of bayberry tree..... 1 fl. ounce.
 Jamaica rum..... 1 pint.
 Strong alcohol..... 4 pints.
 Water..... 3 pints.

Mix the rum, alcohol and water, then add the oil, mix, and filter.

1957. Bay Rum.

Oil of bay..... 6 drams.
 Oil pimento..... 1 dram.
 Ether, acetic..... 1 ounce.
 Powdered castile soap.... 4 drams.
 Alcohol..... 12 pints.
 Water..... 10 pints.

Mix. Allow to stand seven days; then filter.

1958. Bay Rum.

Oil of bay..... 4 fl. drams.
 Jamaica rum..... 8 fl. ounces.
 Water..... 4½ pints.
 Stronger alcohol..... 3 pints.

Filter through magnesia and charcoal, if necessary.

1959. Bay Rum.

Jamaica rum..... 16 ounces.
 Alcohol..... 64 ounces.
 Water 48 ounces.

Mix and add:

Oil of bay..... 1 ounce.

1960. Bay Rum "After Shave."

Bay rum..... 3 pints.
 Glycerine ½ pint.
 Extract violet..... ½ ounce.
 Rose water..... ½ pint.

Mix and filter, if necessary.

1961. Barbers' Bay Rum.

Oil bay 6 fl. drams.
 Oil pimento 1 fl. dram.
 Oil orange peel 1 fl. dram.
 Tincture orange
 peel, U. S..... ½ ounce.
 White castile soap 4 drams.
 Cologne spirit 12 pints.
 Water 9 pints.

Dissolve the castile soap in a pint of the water by the aid of heat; dissolve the oils in the cologne of spirit, gradually add the solution of soap, tincture of orange and water, let stand and filter.

1962. Bay Rum—Domestic.

Oil bay 5 fl. ounces.
 Alcohol 6¼ gallons.
 Water 3¾ gallons.
 Bay leaves 5 ounces.
 Macerate 14 days; filter.

1963. Bay Rum Essence.

Oil bay 1 ounce.
 Oil pimento 1 dram.
 Oil cloves 1 dram.
 Acetic ether 2 ounces.

With alcohol 60 per cent. the above is sufficient to make 6 gallons of bay rum.

1964. Bay Rum Essence.

Tincture bay leaves 300 parts.
 Oil bay 10 parts.
 Borax 50 parts.
 Ammonium carbonate 50 parts.
 Rose water, q. s. ad..... 1,500 parts.

1965. Bay Rum Hair Tonic.

Bay rum	5 pints.
Glycerine	16 ounces.
Tincture cantharides	8 ounces.
Tincture soap bark	8 ounces.
Rose water	8 ounces.
Orange flower water	8 ounces.

Mix, and filter if necessary.

1966. Bay Rum (Thompson's).

Distilled oil bay (Myrcia acris)	1 fl. ounce.
Ether acetic	1 fl. ounce.
Oil pimento	½ fl. ounce.
Alcohol	1½ gallons.
Water	1½ gallons.

Add 1 ounce pure borax; this gives the desired color. First dissolve it in ½ gallon of the water, then filter.

1967. Bay Rum (St. Thomas).

Oil of bay	½ ounce.
Carbonate of magnesium ...	1 ounce.
New England rum	1 pint.
Alcohol	2 pints.
Water	2 pints.

Tincture of grass, sufficient to color.

Rub the oil with the carbonate of magnesium; then gradually add the water, alcohol and New England rum. Filter through paper, and add sufficient tincture of grass to give it a light green tint.

BRILLIANTINES.

1968. Brilliantine.

Castor oil	4 fl. drams.
Almond oil	3½ fl. ounces.
Glycerine	1½ fl. drams.
Extract jockey club.....	3 fl. drams.
Alcohol, quantity suffi- cient to make.....	8 fl. ounces.

1969. Brilliantine.

Almond oil	4 ounces.
Glycerine	½ ounce.
Rectified spirit.....	2 ounces.
Oil of rose geranium.....	6 drops.

1970. Brilliantine.

Almond oil	2½ pounds.
Spermaceti	½ pound.
Oil of lemon.....	3 ounces.

Melt the spermaceti at a low temperature; add the oil and heat until all flakes disappear. Let the jars into which it is to be poured be warm, and then cool as slowly as possible to insure good crystals.

1971. Brilliantine.

Honey	1 fl. ounce.
Glycerine,	
Cologne water, of each....	½ fl. ounce.
Alcohol	2 fl. ounces.

1972. Brilliantine.

Veal fat.....	4 ounces.
Spermaceti	2 ounces.
Castor oil.....	12 ounces.
Oil of bitter almonds.....	1 drop.
Oil of cloves.....	10 drops.
Oil of bergamot.....	20 drops.

Melt together the first three ingredients, and add the perfumes when nearly cold.

1973. Brilliantine.

Castor oil	6 parts.
Venetian soap	2 parts.
Benzoin	2 parts.
Alcohol	200 parts.
Oil of rose or neroli, quantity sufficient.	

1974. Brilliantine.

Glycerine	10 parts.
Spirit	100 parts.
Rosewater	100 parts.

1975. Brilliantine.

Castor oil	6 parts.
Glycerine	6 parts.
Benzoin	2 parts.
Spirit	200 parts.
Perfume, quantity sufficient.	

1976. Brilliantine, Non-Separable.

Castor oil	½ ounce.
Alcohol, 96 per cent.....	1 ounce.
Otto of rose.....	2 drops.
Oil of neroli.....	2 drops.
Mix and color with tincture of saffron.	

1977. Brilliantine, Non-Separable.

Castor oil	4 ounces.
Rectified spirit (60 O.P.)..	8 ounces.
Oil neroli	6 drops.
Oil rose geranium.....	10 drops.
Oil verbena	6 drops.
Oil lemon	30 drops.

Green color may be imparted by green oil of elder, pale rose by alkanet, golden with saffron or oily butter color.

POMADES FOR MOUSTACHES.

1978. Moustache Cosmetique.

Yellow wax.....	45 grams.
Benzoinated lard.....	35 grams.
Olive oil.....	10 grams.

Melt, and add:

Venice turpentine.....	10 grams.
Balsam Peru.....	10 drops.
Oil bergamot.....	5 drops.

When almost cold, roll into sticks.

1979. Browa Moustache Cosmetique.

As the last, but using levigated umber for "plain brown," and levigated terra di sienna for "auburn" and "chestnut."

1980. Black Moustache Cosmetique.

From good lard, 5 parts; wax, 2 parts; (or, hard pomatum, 7 parts); melt, stir in levigated ivory black, 2 parts, and pour it into molds of tinfoil, which are afterwards to be placed in paper sheaths.

1981. Moustache Cosmetique, Hard.

Yellow wax..... 50 grams.
Benzoinated lard..... 35 grams.
Melt, and add:
Venice turpentine..... 10 grams.
Elemi 5 grams.
Balsam Peru..... 5 drops.
Oil bergamot..... 3 drops.
When almost cold, roll into sticks.

1982. White Stick Pomade.

Melt together 50 parts white wax, 25 parts castor oil, 25 parts Venetian turpentine, and for every 3 ounces of the mixture add 5 drops of the perfume given below.

1983. Blonde Stick Pomade.

Melt together 250 parts yellow wax, 125 parts castor oil, 125 parts Venetian turpentine, 1 part etheric extract of anatto, and perfume as above.

1984. Light Brown Stick Pomade.

Use the bases above given (for blonde), adding 1 part of extract of alkanet and $2\frac{1}{2}$ parts of chlorophyl. Perfume as above.

1985. Dark Brown Stick Pomade.

The same bases as for light brown, the deepening of the shade being obtained by increasing the proportion of extract of alkanet and chlorophyl, a very dark brown being secured by doubling the proportion of these ingredients. An intense brown is attained by the addition of umber, which should be rubbed up with the castor oil before melting.

1986. Perfume for Stick Pomades.

Bergamot oil..... 400 parts.
Lemon oil..... 300 parts.
Oil of lavender..... 200 parts.
Neroli 50 parts.
Cinnamon oil..... 30 parts.
Clove oil..... 20 parts.
Oil of wintergreen..... 10 parts.
Attar of ylang ylang..... 5 parts.
Heliotropin 5 parts.
Coumarin 1 part.

Mix, and let stand for several days before using. Five drops to every 3 ounces of pomade are sufficient.

1987. Hungarian Pomades.

For packing in jars or tubes. Bottles with ground glass stoppers should be used, as when ordinary corks are used the contents dry out and become hard. The tubes are best, as the pomade cannot dry out, and retains its proper consistency to the

last portion. A very handsome and salable article can be produced by pasting on the tubes attractive labels, which are best affixed by a solution of water glass 100, with sugar 30. The pomade consists of:

Powdered gum arabic..... 150
Powdered soap..... 100
Water 200

Rubbed to a uniform paste and added to a warm, melted mass of

Cetaceum 20
Yellow wax..... 200
Water 300

Finally, add 20 glycerine and sufficient oil odorat, drop by drop, with constant stirring until cool.

1988. Pomade Hongroise for Fixing Moustaches.

Wax 4 troy ounces.
Oil soap..... 2 troy ounces.
Oil of bergamot..... $\frac{1}{2}$ fl. ounce.
Powdered gum arabic.. 2 troy ounces.
Water 4 fl. ounces.

Dissolve the gum in the water; melt the wax and soap together in a water-bath, stir in the solution of gum, and lastly, just before cooling, add the bergamot. Color, as required, with burnt umber or lampblack, rubbed to perfect smoothness on a slab with a little of the melted wax. Put up in small porcelain jars.

1989. Transparent Cosmetic.

Tallow oil..... 8 ounces.
Cocoanut oil..... 2 ounces.
Soda lye (sp. g. 1.336)..... 5 ounces.
Strong alcohol (60 per cent) 5 fl. ounces.
Canada balsam..... $\frac{1}{2}$ ounce.
Cassia oil..... 15 minims.
Oil of cloves..... 10 minims.
Oil of lavender..... 10 minims.
Oil of citronella..... 10 minims.
Oil of thyme..... 10 minims.
Glycerine 1 ounce.

Melt the fats together; mix the soda lye and alcohol and warm over a water-bath, then mix with the melted fat and keep well stirred over the water-bath until a portion being removed sets to a soap-like firmness. Then remove from the heat and mix in the perfume, Canada balsam and glycerine, and cool as rapidly as possible by standing the vessel in cold water. A tin vessel is best for making this preparation. When nearly cold it may be run into the desired shapes or molds.

1990. Pomades in Boxes.

Yellow wax..... 450.
Benzoinated lard..... 350.
White resin..... 100.
Venetian turpentine..... 100.
Oil odorati, quantity sufficient.

1991. Pomades in Tablets.

Yellow wax.....	100.
Suet	40.
Lard.....	50.
Turpentine, Venetian.....	20.
Elemi	10.
Oil odorati, quantity sufficient.	

1992. Moustache Fixing Varnish.

Mastic.....	2 parts.
Sandarac.....	4 parts.
Colophony.....	12 parts.
Spirit of wine.....	16 parts.
Ether.....	2 parts.
All by weight. Dissolve and strain.	

1993. Pomade Collante.

For wigs and false curls:

Take 1½ pounds of best burgundy pitch, 8 ounces virgin wax, melt them together in a stoneware vessel, and add 1 ounce of liquid pomade. Remove from the bath, and, while yet liquid and warm, stir in 7 fluid ounces of alcohol; when the spirit has been well incorporated, replace the vessel upon the sand-bath, and heat up to a slight boiling; then strain through a linen cloth, perfume with 2 ounces essence bergamot, and, when cold enough, run into molds.

DANDRUFF.**1994. Dandruff.**

Resorcin	3 scruples.
Olive oil.....	3 scruples.
Ether.....	3 scruples.
Alcohol.....	6½ ounces.

Apply to the roots of the hair twice a week, after washing with soap and warm water.

1995. Dandruff.

Salol.....	½ dram.
Tannic acid.....	1 dram.
Balsam of Peru.....	½ ounce.
Lanolin	½ ounce.
Benzoated lard.....	1 dram.

1996. Dandruff.

Balsam Peru.....	½ dram.
B-naphthol	1 dram.
Lanolin.....	6 drams.
Benzoated lard.....	2 drams.

1997. Dandruff.

Tincture cinchona com- pound.....	1 fl. ounce.
Tincture benzoin, com- pound	2 fl. ounces.
Glycerine.....	1 fl. ounce.
Spirit odorat.....	2 fl. ounces.
Water	2 fl. ounces.

1998. Dandruff.

Potassium carbonate....	1 dram.
Ammonia water.....	6 fl. drams.
Tincture cantharides....	2½ fl. drams.
Oil nutmeg.....	12 drops.
Spirit odorat, quantity sufficient, add.....	½ pint.

1999. Dandruff.

The head should be first well washed with hot water and alcohol soap. Alcohol soap consists of two ounces of soft soap (made from olive oil), ½ ounce alcohol, and 10 minims oil of lavender. The soap is afterwards washed away with plenty of hot water and the head thoroughly dried with a warm cloth. Then thoroughly and firmly rub into the scalp a glycerole of tannin, strength from 10 to 30 grains to the ounce, according to the gravity of the case. If the tannin fails, resorcin may be tried. The process should be repeated two or three times a week as required. After total removal of the dandruff, apply daily a dressing of carbolic oil containing 1 ounce olive oil, 10 grains of absolute phenol, and 1 dram oil cinnamon, warm together and decant.

2000. Dandruff.

Red oxide of mercury.....	10 grains.
Ammoniated mercury.....	10 grains.
Petrolatum.....	1 ounce.
Mix, and apply every night.	

2001. Dandruff.

Ointment nitrate of mercury	1 dram.
Petrolatum	7 drams.

Mix. Cut the hair short and keep well brushed, and apply the ointment every night for a fortnight.

2002. Dandruff.

Caustic potash	8 grains.
Phenic acid	24 grains.
Lanolin	4 drams.
Cocoanut oil	4 drams.

This preparation should be rubbed into the scalp morning and evening. Complete cure is usually effected in one to three months.

2003. Dandruff.

Compound tincture cinchona	1 fl. ounce.
Compound tincture benzoin	2 fl. ounces.
Glycerine	1 fl. ounce.
Cologne water	2 fl. ounces.
Water	2 fl. ounces.

2004. Dandruff.

Corrosive sublimate	10 grains.
Cologne	5 ounces.
Rub well into the scalp every night.	

2005. Dandruff Lotion.

Simple tincture of
cinchona 1 fl. ounce.
Solution of potassa..... 2 fl. drams.
Salts of tartar 1 dram.
Cologne water 1 fl. ounce.
Water up to ½ pint.

Mix. Apply to the head twice or three times a week.

2006. Dandruff Lotion.

Chloral hydrate 1 dram.
Glycerine 4 drams.
Bay rum 8 ounces.

2007. Dandruff Pomade.

Salicylic acid 30 grains.
Borax 15 grains.
Balsam Peru 25 minims.
Oil anise 6 drops.
Oil bergamot 20 drops.
Vaseline 6 drams.

HAIR CURLING LIQUIDS.

2008. Hair Curling Liquid.

Borax 3 ounces.
Gum arabic 1 dram.
Hot water 2 pints.
Spirits of camphor 1½ fl. ounces.

Dissolve the borax and the gum in hot water, and when nearly cold add the spirits of camphor. On retiring at night wet the hair with the above liquid.

2009. Hair Curling Liquid.

Carbonate potash 2 drams.
Water of ammonia 1 dram.
Glycerine 4 drams.
Alcohol 12 drams.
Rose water 18 fl. ounces.

Mix together. Moisten the hair; adjust it loosely, when it curls upon drying.

2010. Hair Curling Liquid.

Gum arabic 1 dram.
Sugar 1 dram.
Rose water 2 ounces.

Mix and dissolve. Moisten the hair with the solution at bedtime; roll in twists of paper, so as to make papillotes.

2011. Hair Curling Liquid.

Carbonate potash
(dry) 2 drams.
Powdered cochineal .. ½ dram.
Liquor ammonia 1 dram.
Spirit rose 1 dram.
Glycerine 2 drams.
Rectified spirit 1½ imp. fl. ozs.
Distilled water 18 fl. ounces.

Digest with agitation for a week, then decant or filter. The hair is moistened with it and then loosely adjusted. The effect occurs as it dries.

2012. Hair Curling Liquid.

Steep 6 ounces gum tragacanth for 40 hours in 1 gallon rose water, stirring frequently; strain through a cloth and let stand for a few days, then strain and work into it 1 dram of oil of roses.

2013. Hair Curling Liquid.

Borax 2 ounces.
Gum arabic 1 dram.

Add hot water (not boiling) 1 quart; stir, and as soon as the ingredients are dissolved add 3 tablespoonfuls strong spirits camphor. On retiring to rest wet the hair with the above liquid, and roll it in twists of paper as usual.

2014. Hair Curling Fluid.

Saccharated solution of lime 2 drams.
Mucilage of acacia..... 4 drams.
Essence of rose.....½ dram.
Water to make..... 6 ounces.

2015. Hair Curling Fluid or Curlique.

Mucilage of quince seed may be used as a bandoline, or tincture benzoin with a little washed sulphur and oil of sweet almonds.

2016. Curline for the Hair.

Make a thick mucilage of gum tragacanth in rose water. Add a small quantity of salicylic acid dissolved in alcohol, as a preservative agent.

2017. Hair Curling Mixture.

Chloride of ammonium..... 1 dram.
Carbonate of potassium.... 2 drams.
Extract of jasmine..... 4 drams.
Extract of white rose..... 4 drams.
Glycerine 4 drams.
Alcohol 2 ounces.
Powdered tragacanth..... 1 dram.
Water 36 ounces.

Mix the tragacanth, in very fine powder, with the alcohol and triturate thoroughly; then add some of the water and the glycerine to make a mucilage, mixing in the perfumes, and finally the salts, dissolved in the remainder of the water.

DEPILATORIES.

2018. Depilatory.

Powdered quicklime..... 10 grams.
Sulphide of barium..... 10 grams.
Starch 10 grams.

The powder is first moistened with a little water and then applied. It acts in a few minutes, and is a really successful depilatory.

2019. Depilatory.

Mix 2 parts of barium sulphide, 1 part of starch, and 1 part of zinc. This depilatory is made into a paste with water, spread on

the skin and allowed to remain for 10 minutes. As its success depends upon the freshness of the sulphide employed, the latter should be made as required by mixing powdered barium sulphate with its own weight of charcoal, making into a stiff paste with linseed oil, forming the mass into a roll like sausage, which is to be placed in the fire until deflagration is complete.

2020. Depilatory.

Mix lime and water to a thick cream, and pass through the mixture 25 or 30 times its volume of sulphuretted hydrogen gas. When the gas escapes, stop the process. The pulpy mass is spread on paper, and applied for 10 or 15 minutes, and then washed off with a sponge and water. The only objection to this is its disgusting smell.

2021. Chinese Depilatory.

Quicklime 16 ounces.
Pearlash 2 ounces.
Liver of sulphur..... 2 ounces.

Reduce it to a fine powder and keep it in a well-closed bottle.

2022. Boudet's Depilatory.

Crystallized hydrosulphate
of soda..... 3 parts.
Quicklime, in powder..... 10 parts.
Starch 10 parts.

Mix. To be mixed with water and applied to the skin and scraped off in two or three minutes, with a wooden knife.

2023. Depilatory, Good.

Orpiment, 1 part; starch and quicklime, each 10 parts. Powder the orpiment thoroughly, mix with the starch and add the quicklime. A little to be made into a paste with water when required, and this paste to be spread on the hairy parts, allowed to remain for a few minutes, then removed with a blunt knife.

2024. Depilatory Pomade.

Carbonate of sodium..... 1 dram.
Quicklime ½ dram.
Charcoal powder 8 grains.
Glycerine 1 fl. dram.
Lard 7 drams.

After applying this pomade to the affected parts for 10 or 12 days, the skin takes a rose tint and the hairs can be easily drawn out without pain.

2025. Moles.

Hairy moles frequently occur upon the face or upon other exposed portions of the skin. Heretofore the removal of these blemishes has been effected by means of the knife, electrolysis or caustics. The first

and last methods are limited in their applications by the extent of the mole. The second method is frequently tedious. A new procedure is to apply ethylate of sodium, one thorough application being sufficient. A bland ointment is used as a dressing, and the result is a very thin, flexible scar, which is scarcely perceptible. Of course, the ethylate of sodium is applied to the patient only under chloroform, as it is very painful.

HAIR DYES.

2026. Hair Dye.

Nitrate of silver..... 20 grains.
Sulphate of copper..... 2 grains.
Ammonia, q. s.
Distilled water, q. s.

Dissolve the salts in ½ ounce of water, and add ammonia until the precipitate which is formed is redissolved. Then make up to 1 ounce with water. Apply to the hair with an old tooth or nail brush. This solution slowly gives a brown shade. For darker shades, apply a second solution, composed of:

Yellow sulphide ammonia.. 2 drams.
Solution of ammonia..... 1 dram.
Distilled water..... 1 ounce.

2027. Bismuth Hair Dye.

No. 1.

Bismuth subnitrate..... 200 grains.
Water 2 ounces.
Nitric acid..... 420 grs. or q. s.

Use heat to effect solution.

No. 2.

Tartaric acid..... 150 grains.
Sodium bicarbonate..... 168 grains.
Water 32 ounces.

When effervescence of the latter has ceased, mix the cold liquids by pouring No. 1 into No. 2, with constant stirring. Allow the precipitate to subside, transfer it to a filter or strainer, and wash with water until free from the sodium nitrate formed, as this salt would be an unnecessary impediment to the operation of the dye. Now allow the magma to drain until its weight is reduced to at least 4 ounces. This can be readily determined without removing it from the filter and funnel, if both have been previously weighed. Transfer the magma, which consists of bismuth tartrate, to a dish, and dissolve it by the addition of sufficient stronger water of ammonia.

Next dissolve 100 grains of sodium hyposulphite in 3 ounces of water, and mix the two liquids. The total volume of the product

should be about 7 or 8 ounces, which would make the solution contain about 10 per cent of bismuth tartrate, the product from above quantities being nearly 300 grains. The addition of 1 ounce of glycerine is calculated to make it more effective in coloring the hair, as this ingredient prevents entire drying-up of the constituents, and thus favors a continuation of the decomposition.

Should it be desired to produce a jet-black, this may be accomplished (after the dye given above has first been applied and allowed to dry) by the application of a solution of an alkaline sulphide or sulphuret. It is not necessary that the latter salt should be absolutely pure, as the commercial sulphuret of potassium answers well if fresh or undecomposed. The application of these dyes and mordants is usually made by means of a tooth brush and comb, so as to avoid staining the scalp.

2028. Brown Hair Dye.

Dissolve 8 parts pyrogalllic acid in 16 of alcohol, and mix with a solution of 1 part sulphide sodium in 48 water.

2029. Brown Hair Dye.

Acetate of lead..... 2 drams.
Hyposulphite of sodium... 1 ounce.
Rose water..... 14 ounces.
Glycerine..... 2 ounces.

Dissolve the lead and soda in separate portions of the water, filter separately, mix the solutions, and add the glycerine.

2030. Chestnut Brown Hair Dye.

Pyrogalllic acid..... 1 dram.
Chloride of copper..... 2 drams.
Nitric acid..... 5 drops.
Distilled water..... 6 ounces.
Dissolve.

2031. Crescent Hair Dye.

(Single bottle.)

Nitrate of copper..... 360 grains.
Nitrate of silver (crystal). 7 ounces.
Distilled water..... 60 ounces.

Water of ammonia, a sufficient quantity.
Dissolve the salts in the water and add the water of ammonia carefully until the precipitate is redissolved. This properly applied will produce a very black color; a lighter shade, even to light brown, can be secured by diluting the solution. Equally as good results have been obtained with the use of sulphate of copper as with the nitrate.

2032. Darkening the Hair.

Tannic acid..... ½ dram.
Glycerine..... 2 drams.
Oil of sweet almonds..... 6 drams.
Oil neroli..... 2 drops.
Oil orange peel..... 20 drops.

2033. Moustache Dye.

Silver nitrate 60 grains.
Ammonia water ½ fl. ounce.
Distilled water 2½ fl. ounces.
Olive oil 1 fl. ounce.

Dissolve the silver nitrate in the water, add the ammonia water, and finally the olive oil. The mixture is to be shaken before used.

2034. Non-Injurious Hair Dye.

A solution composed of
Paraphenyldiamin 20 parts.
Caustic soda 14 parts.
Water 1,000 parts.

Is applied to the hair after all fatty matter has been removed by previous washing with an alkaline solution. The application is followed by a wash consisting of—

Peroxide of hydrogen 3 parts.
Water 100 parts.

In the course of the day the hair assumes a dark color, which deepens in hue to a dark blue-black upon further application of the dye. If a brown color is desired it is recommended to use a 5 per cent. solution of hydroxide of iron in place of peroxide of hydrogen. (Controlled by patent in Germany.)

2035. Raven's Wing Hair Dye.

(Two bottles.)

No. 1—

Nitrate of silver (crystal) 1½ ounces.
Distilled water 12 ounces.
Ammonia water sufficient to make a clear solution.

Dissolve the nitrate of silver in the water and add the ammonia water until the precipitate is re-dissolved.

No. 2—

Pyrogalllic acid 2 drams.
Gallic acid 2 drams.
Cologne water 2 ounces.
Distilled water 4 ounces.

2036. Tea Hair Dye.

Black tea 6 ounces.
Boiling water 1 pint.

Boil together for half an hour, keeping to the quantity of water. Then strain and cool, add—

Bay rum 8 fl. ounces.
Oil of lavender 1 dram.
Glycerine 4 ounces.

Also by substituting half the quantity of extract of logwood for the tea a brown dye is produced. This is much used in some parts, and is said to be excellent. It is perfectly harmless.

2037. Walnut Hair Dye.

The hulls of green walnuts are pounded up, and the juice expressed by squeezing in a tincture press. The juice is then rubbed up with olive oil.

2038. Walnut Hair Dye.

Green walnut shells 40 parts.
 Alum 5 parts.
 Olive oil 200 parts.

Digest on water-bath until all moisture has been dispelled. Express and perfume to suit.

2039. Walnut Hair Dye.

The juice as expressed is used mixed with a little rectified spirits and perfumed with oil of cloves, the latter acting as a preservative. The whole is allowed to stand for a week or two with occasional agitation, and the clear solution is eventually decanted. Sometimes salt is used to preserve it. These dyes stain the skin very strongly.

2040. Twigg's Hair Dye.

Precipitated sulphur 1 dram.
 Acetate of lead 1 dram.
 Rose water 4 fl. ounces.

Triturate together in a mortar. This should be applied twice a day until it gradually restores the hair to its natural color. The addition of $\frac{1}{2}$ ounce of glycerine will take from it a drying property which is undesirable.

HAIR RESTORERS AND HAIR OILS.

2041. Hair Restorer.

Lac sulphur..... 1 dram.
 Lead acetate..... 1 dram.
 Bay rum..... 4 ounces.
 Jamaica rum..... 2 ounces.
 Sodium chloride..... 1 dram.
 Rose water..... 4 ounces.
 Glycerine 2 ounces.

2042. Hair Restorative.

Bay rum..... 1 pint.
 Alcohol $\frac{1}{2}$ pint.
 Castor oil..... $\frac{1}{2}$ ounce.
 Ammonium carbonate..... $\frac{1}{4}$ ounce.
 Tincture cantharides..... $\frac{1}{2}$ ounce.

Shake when used. Use daily.

2043. Eau Lustral (Hair Restorative).

Castor oil..... 2 quarts.
 Linseed oil..... 4 ounces.
 Tincture of cantharides... 4 ounces.
 Alcohol 13 quarts.
 Bergamot oil..... 2 ounces.
 Lemon oil..... 1 ounce.
 Clove oil..... $\frac{1}{2}$ ounce.
 Neroli oil..... 2 drams.

Mix the two fat oils and dissolve them in the alcohol by agitation. Then add the tincture of cantharides and the perfumes, and color red with cochineal tincture or henna tincture.

2044. Imperial Hair Restorer.

Sulphate quinine..... 1 scruple.
 Powdered borax..... $\frac{1}{2}$ dram.
 Ammonia water..... 2 drams.
 Tincture cinchona com-
 pound..... $\frac{1}{2}$ ounce.
 Imported bay rum q. s. ad. 4 ounces.

To 1 ounce of bay rum add the quinine and the borax, add another ounce of bay rum, gradually add the ammonia, then sufficient bay rum to make 4 ounces, and filter.

2045. Jaborandi Hair Restorer.

Sulphate of quinine..... 20 grains.
 Tincture of jaborandi..... 1 ounce.
 Glycerine 1 ounce.
 Eau de cologne..... 2 ounces.
 Bay rum..... 2 ounces.
 Rose water..... 11 ounces.

Dissolve the quinine in the rose water with the aid of 20 drops dilute sulphuric acid, and add the glycerine. Mix the tincture, cologne and bay rum and add to the rose water mixture.

2046. Persian Hair Restorer.

Two hundred and fifty grams cantharides vinegar, 125 grams milk of sulphur, 2,500 grams glycerine, 20 drops oil of rose, sufficient distilled water to increase the quantity to 10 liters.

**2047. Castor Oil Pomade, Trans-
parent.**

Spermaceti 2 ounces.
 Castor oil (Italian) 5 ounces.

Melt, and add gradually, with constant stirring:

Alcohol 5 ounces.
 Oil bergamot..... 30 minims.
 Oil neroli..... 4 minims.
 Oil cloves..... 4 minims.
 Oil verbenae..... 4 minims.
 Oil rose virgin..... 4 minims.

Fill into warm bottles.

2048. Hair Pomade (Lassar's).

Pilocarpine 2 parts.
 Quinine hydrochlorate..... 4 parts.
 Sulphur, precipitated..... 10 parts.
 Balsam of Peru..... 20 parts.
 Ox marrow, enough to
 make..... 100 parts.

2049. Regeneration of the Hair.

The neighborhood of the bald spot is shaved, or the hairs which come out easily are removed, and an application is made of a mixture composed of equal parts of chloroform and glacial acetic acid. This mixture has caustic properties, and must be applied lightly with a camel's hair brush each evening; and if the bare spot be large, only part of it can be treated at a time, or too much pain will be caused.

2050. Oleate of Quinine Pomade.

Sulphate of quinine.....	1.0 gram.
Stearic acid.....	2.5 grams.
Oleic acid.....	7.5 grams.

2051. Regenerative Pomade.

Olive oil.....	21 ounces.
White wax.....	3 ounces.
Palm oil.....	3 ounces.
Rose pomade.....	6 ounces.
Jasmine pomade.....	2 ounces.
Orange pomade.....	1 ounce.

2052. Burdock Root Hair Oil.

Burdock root, well dried and coarsely powdered.. 1,000 parts.
 Best olive oil..... 4,000 parts.
 Orange oil..... 50 parts.
 Spanish geranium oil..... 25 parts.
 Clove oil..... 10 parts.
 Neroli oil..... 5 parts.

Digest the burdock with the olive oil in a hot-water bath for four hours, and then set the mixture aside for ten days, giving it frequent stirrings. Filter off and add the essential oils. To get good results the oil should be well rubbed into the scalp and hair follicles.

2053. Family Hair Oil.

Castor oil.....	1 pint.
Alcohol.....	6½ pints.
Tincture cantharides.....	½ pint.
Oil lavender.....	½ ounce.
Oil rosemary.....	½ ounce.
Oil cloves.....	1 ounce.
Oil bergamot.....	2 ounces.
Powdered alkanet root....	1 ounce.

Mix the oils in a gallon bottle; put the alkanet root on a filter or pack in a funnel, and pour on the alcohol until the color has all been discharged, then add alcohol to complete the quantity directed.

2054. Perfumed Hair Oil.

Castor oil.....	10 fl. ounces.
Very strong alcohol.....	2 fl. ounces.
Essence of jasmine.....	2 fl. drams.

Mix.

Any other essential oil may be substituted for the essence of jasmine; the bottles should be labeled according to perfume, and the mixture colored rose oil red.

2055. Star Hair Oil.

Castor oil.....	6½ ounces.
Alcohol.....	1 ounce.
Oil citronella.....	6 drops.
Oil lavender.....	12 drops.

Mix. An excellent dressing.

2056. Walnut Hair Oil.

Crush 2 ounces of fresh green walnut shells with ¼ ounce of powdered alum to a smooth green paste; digest with 10 ounces of benzolated oil in a water-bath until

all aqueous vapor has been driven off. Perfume with 2 drops of oil of rose and 10 drops of oil of neroli. The walnut shells are best obtained about the end of August or beginning of September. They contain besides oil and other constituents, a substance resembling pyrogalllic acid, and impart a brown shade to the hair.

2057. Camphorated Hair Oil.

Olive oil in which 5 or 6 per cent camphor (crushed) has been dissolved by means of a gentle heat. A popular application in weak and falling hair. To increase its action, a little oil of thyme, rosemary, or nutmeg should be added to it.

2058. Coconut Hair Oil.

Cocoonut oil.....	½ pint.
Castor oil.....	½ pint.
Alcohol.....	6 parts.
Slippery elm bark.....	1 ounce.
Water	4 ounces.
Oil of bergamot.....	1 ounce.
Oil of lemon.....	½ ounce.
Oil of pimento.....	¼ ounce.
Oil of almonds.....	1 dram.

The cocoonut oil is mixed with the castor oil and the alcohol mixed slowly with them at a slight heat. The elm bark in coarse powder is dissolved in the water and strained and mixed by agitation with the rest. Lastly it is filtered, perfumed and colored with a little tincture of gamboge.

2059. Hair Oil.

Castor oil, ½ pint; 95 per cent alcohol, ½ pint; tincture cantharides, ½ ounce; oil of bergamot, 2 drams. Color a pale pink with alkanet root.

2060. Mucassar Oil.

Oil of ben or almonds (red-dened).....	1 pint.
Oil of rosemary.....	1 dram.
Oil of origanum.....	1 dram.
Oil of nutmeg.....	15 drops.
Otto of roses.....	15 drops.
Neroli	6 drops.
Essence of musk.....	3 or 4 drops.

2061. Huile de Mucassar (Macassar Oil) of Nuquet.

Oil of ben.....	8 quarts.
Oil of nolsette.....	4 quarts.
Alcohol... ..	1 quart.
Essence bergamot.....	3 ounces.
Spirit of musk.....	3 ounces.
Spirit of Portugal.....	2 ounces.
Essence of roses.....	2 drams.

Mix and keep the whole over a water-bath for one hour in a well-closed vessel. Digest them in the same vessel for a week, stirring several times daily. Color with alkanet.

2062. Huile de Macassar.

Oil of ben..... 8 quarts.
 Oil of noisette..... 4 quarts.
 Alcohol 1 quart.
 Essence bergamot..... 3 ounces.
 Essence rose..... 2 drams.
 Spirit of musk..... 3 ounces.
 Spirit of Portugal..... 2 ounces.

Mix and digest precisely in the same manner and for the same length of time as the preceding. Will keep much longer than Naquet's.

2063. Stimulating Pomatum.

Almond oil..... $\frac{1}{4}$ pound.
 White wax..... $\frac{1}{2}$ ounce.
 Clarified lard..... 3 ounces.
 Liquid ammonia..... $\frac{1}{4}$ ounce.
 Oil of lavender..... 1 dram.
 Oil of cloves..... 1 dram.

2064. Huile de Phenix or Baume Nerval.

Beef marrow, purified.... 4 ounces.
 Lard, purified..... 2 ounces.
 Concrete oil mace..... 4 ounces.
 Oil of cloves, lavender,
 mint, rosemary, sage, and
 thyme, each..... 2 drams.
 Balsam of tolu..... 4 drams.
 Camphor 1 dram.
 Alcohol 36 degrees Baum.. 1 ounce.

Place the alcohol in a glass matrass, and by the heat of a water-bath, dissolve therein the balsam tolu. This done, add the camphor and essential oils. On the other hand, melt together the marrow, lard, oil of mace, and, as it congeals, add the alcoholic solution first made, and stir the whole well until entirely cool.

2065. Hair Oil Perfume.

The quantities in the following four formulas are for 1 quart of hair oil:

Heliotropin 8 grains.
 Coumarin 1 grain.
 Oil of orris..... 1 drop.
 Oil of rose..... 16 minims.
 Oil of bergamot..... 32 minims.

2066. Hair Oil Perfume.

Coumarin 1 grain.
 Oil of lemon..... 16 minims.
 Oil of bergamot..... 48 minims.

2067. Hair Oil Perfume.

Coumarin 2 grains.
 Oil of wintergreen..... 2 drops.
 Oil of cloves..... 4 drops.
 Oil of cassia..... 4 drops.
 Oil of lavender flower..... 16 minims.
 Oil of lemon..... 48 minims.
 Oil of bergamot..... 72 minims.

2068. Hair Oil Perfume.

Coumarin 1 grain.
 Oil of bitter almond..... 2 drops.
 Oil of cassia..... 2 drops.
 Oil of lavender flower..... 32 minims.
 Oil of lemon..... 48 minims.
 Oil of bergamot..... 80 minims.

2069. Perfumes for Pomades, Hair Oils, Etc.

Liquid storax..... $1\frac{1}{2}$ drams.
 Oil sassafras..... 3 drams.
 Oil clove..... 6 drams.
 Oil orange..... 6 drams.
 Oil lemon..... 3 ounces.
 Oil bergamot..... 3 ounces.

2070. Perfumes for Pomades, Hair Oils, Etc.

Balsam Peru..... 30 parts.
 Oil bergamot..... 30 parts.
 Oil petit grain..... 31 parts.
 Oil clove..... 60 parts.
 Oil lavender..... 62 parts.
 Oil lemon..... 93 parts.
 Tincture ambergris..... 125 parts.

HAIR TONICS.

2071. Hair Tonic.

Sage 1 ounce.
 Bolling water..... 1 pint.
 Steep for an hour, strain, and add:
 Glycerine 2 ounces.
 Borax $\frac{1}{4}$ ounce.
 Lac sulphur..... $\frac{1}{4}$ ounce.
 Tincture cantharides..... $\frac{1}{4}$ ounce.
 Perfume with oil of bergamot.

2072. Hair Tonic.

Chloral hydrate..... 2 drams.
 Vinegar of cantharides..... 4 drams.
 Tincture of cinchona..... 2 drams.
 Glycerine $\frac{1}{2}$ ounce.
 Orange flower water,
 Rose water,
 Each equal parts, to..... 8 ounces.
 Brush into the roots of the hair every morning, and rub in a little lanolin at night.

2073. Hair Tonic.

Quinine sulphate..... 20 grains.
 Tincture cantharides..... 2 fl. drams.
 Fluid extract jaborandi.. 2 fl. drams.
 Alcohol 2 fl. ounces.
 Glycerine 2 fl. ounces.
 Bay rum..... 6 fl. ounces.
 Rose water q. s. to make 15 fl. ounces.
 The quinine is dissolved in the alcoholic liquids by warming slightly, then the other ingredients are added.

2074. Hair Tonic.

Fluid extract cinchona, pale 1 dram.
 Tincture cantharides..... 2 drams.
 Glycerine 1 ounce.
 Bay rum..... ½ ounce.
 Rose water q. s. ad..... 20 ounces.

2075. Hair Tonic.

Thirty grains of precipitated sulphur (well washed), triturate it with 60 grains fine sand, add ½ ounce of glycerine and 1 pint of rose water. Shake frequently during several days, when it is ready for use.

2076. Hair Tonic.

Carbolic acid..... 30 minims.
 Tincture of nuxvomica... 2 drams.
 Compound tincture of cinchona..... 1 fl. ounce.
 Tincture of cantharides... 30 minims.
 Cologne water..... 1 fl. ounce.
 Cocoanut oil, to make..... 4 fl. ounces.
 To be applied to the scalp twice a day with a small sponge.

2077. Hair Tonic.

Tincture cantharides..... 4 drams.
 Ammonia water..... 4 drams.
 Rose water..... 2 ounces.
 Glycerine 4 ounces.
 Bay rum..... 9 ounces.

2078. Hair Tonic.

Sodium sozodol..... 2 parts.
 Distilled water..... 300 parts.
 Cologne water..... 20 parts.
 As a wash for the hair and scalp.

2079. Hair Tonic.

Olive oil..... 2 ounces.
 Alcohol 3 ounces.
 Strong salt water..... 3 ounces.
 Spirits lavender..... 1 ounce.
 Rub into scalp once daily.

2080. Astringent Hair Tonic.

Tannin 1 dram.
 Tincture of myrrh 1 fl. ounce.
 Glycerine 5 fl. ounces.

2081. Salicylic Hair Tonic.

Salicylic acid 50 grains.
 Borax 2½ drams.
 Tincture cantharides... 1½ fl. ounces.
 Bay rum 6 fl. ounces.
 Rose water 6 fl. ounces.
 Boiling water
 q. s. to make 18 fl. ounces.

2082. Conservateur, for Diseases of the Hair.

Tincture arnica 10 drams.
 Glycerine 5 drams.
 Spirit 10 drams.
 Water 60 drams.

2083. Crown Hair Tonic.

Era.

Tincture capsicum 3 drams.
 Tincture catharides 3 drams.
 Aromatic spirits
 ammonia 1½ ounces.
 Oil lavender 1 dram.
 Tincture cinchona 2 ounces.
 Alcohol to make 16 ounces.

2084. Eau Athenienne.

Alcohol, best quality 8 quarts.
 Vanilla tincture 1¼ pounds.
 Coumarin tincture 7 ounces.
 Bergamot oil 3½ ounces.
 Rose geranium oil 11 drams.
 Clove oil 14 drams.
 After 8 days add 1 quart of water and mix thoroughly.

2085. Eau de Quinine.

Alcohol, best quality ... 20 quarts.
 Tincture of nutgall..... 2 quarts.
 Tincture Peruvian bark. 2 quarts.
 Vanilla tincture 1 quart.
 Bergamot oil 7 ounces.
 African rose
 geranium oil 3½ ounces.
 Clove oil 14 drams.
 Glycerine
 of 28 degrees B..... 3 pounds.
 Panama wood 4 pounds.
 Boiled with filtered rainwater 12 quarts, bicarbonate of soda 1 pound dissolved in 1 quart of water.
 The alcohol, tinctures and volatile oils are brought into a glass balloon and after vigorous agitation allowed to stand 8 days for the volatile oils to dissolve. The decoction of Panama wood is then added, next the bicarbonate of soda solution, and finally the whole is thoroughly agitated. The Panama wood should not be added while hot, as otherwise the glass balloon might burst. Color the water with cochineal tincture or henna tincture.

2086. Eau de Quinine.

Florentine orris
 root, powdered 4 ounces.
 Clove, powdered 10 grains.
 Nutmeg, powdered 5 grains.
 Sandalwood, powdered.. 1 scruple.
 Alcohol 18 fl. ounces.
 Distilled water 6 fl. ounces.
 Macerate for 7 days, filter, and add—
 Sulphate of quinine 2 scruples.
 Cologne water 1 fl. ounce.
 Cologne water 1 fl. ounce.
 Oil of lavender
 (flowers) 4 minims.
 Oil of rose geranium... 7 minims.
 Glycerine 1½ fl. ounces.
 Oil of orange flowers... 4 minims.

The oils are dissolved in a small quantity

of alcohol before being added with the other ingredients to the tincture first prepared. Should a brighter color be desired, it is recommended to add a small portion of a mixture of equal parts of tincture cochineal and tincture red saunders.

2087. Eau de Quinine, Pinaud.

Cognac	2 kg.
Good cologne water	250 grams.
Spirit, 95 per cent.....	250 grams.
Soap tincture	100 grams.
Tincture cinchona	50 grams.
Peru balsam	20 grams.
Oil bergamot	10 grams.
Fresh sweet oil orange....	10 grams.
Best oil geranium	3 grams.
Tincture cantharides	25 grams.

The whole colored red with cochineal or alkanin.

2088. Eau de Quinine.

Quinine sulphate	1 part.
Tincture cantharides	10 parts.
Glycerine	75 parts.
Alcohol	500 parts.
Tincture of rhatany	20 parts.
Spirit of lavender	50 parts.

2089. Eau de Quinine.

Bisulphate of quinine	½ ounce.
Vinegar of cantharides ..	2½ ounces.
Spirit of rosemary	18 ounces.
Lavender water	8 ounces.
Glycerine of borax	1 ounce.
Glycerine	14 ounces.
Distilled water	80 ounces.
Burnt sugar sufficient to color.	

2090. Eau de Quinine.

Castor oil.....	10 drams.
Balsam Peru.....	3 drams.
Jamaica rum.....	12½ ounces.
Distilled water.....	6 ounces.
Tincture cinchona.....	1½ ounce.
Cologne water.....	1½ ounce.

2091. Eau de Quinine (Imitation).

Alcohol	25 quarts.
Vanilla tincture	2 quarts.
Portugal oil.....	1 pound.
Palma rosa oil.....	8 ounces.
Clove oil.....	3½ ounces.
Glycerine of 28 degrees	

B

Panama wood..... 3 pounds.

Boll in rain water 20 quarts, bicarbonate of soda 1 pound, dissolved in rain water 1 quart. The alcohol, tinctures, and volatile oils are brought into a glass balloon and after vigorous agitation allowed to stand 8 days for the volatile oils to dissolve. The decoction of Panama wood is then added, next the bicarbonate of soda,

and finally the whole is thoroughly agitated. The Panama wood should not be added while hot, as otherwise the glass balloon might burst. Color the water with cochineal tincture or henna tincture.

2092. Eclectic Hair Tonic.

Era Prize.

Castor oil.....	1 ounce.
Oil bergamot.....	40 drops.
Glycerine	3½ fl. ounces.
Tincture cantharides..	4 fl. drams.
Ammonia water.....	4 fl. drams.
Alcohol, to make.....	1 pint.

Dissolve the oils in alcohol, add the tincture, and gradually add the ammonia mixed with the glycerine.

2093. Excelsior Hair Tonic.

Castor oil.....	2 fl. ounces.
Oleo balsamic mixture	3 fl. ounces.
Tincture of cantharides	3 fl. drams.
Benzoic acid.....	135 grains.
Tannic acid.....	1½ drams.
Alcohol	8 fl. ounces.

Mix and filter.

2094. Family Hair Tonic.

Castor oil.....	1 pint.
Alcohol	6½ pints.
Tincture of cantharides..	½ pint.
Oil of lavender.....	½ ounce.
Oil of rosemary.....	½ ounce.
Oil of cloves.....	1 ounce.
Oil of bergamot.....	2 ounces.
Powdered alkanet root....	1 ounce.

Mix the oils in a gallon bottle, full measure, put the alkanet root on a filter (or pack in a funnel) and pour on the alcohol until the color has all been discharged, then add alcohol to complete the quantity directed.

2095. Florentine Hair Tonic.

Alcohol	12 ounces.
Castor oil.....	2 ounces.
Tincture of cantharides...	1 ounce.
Tincture of orris root.....	1 ounce.
Oil of cloves.....	20 minims.
Oil of lemon.....	20 minims.
Oil of bergamot.....	1 dram.

Color, if desired, with a little tincture of alkanet root. Apply a teaspoonful or two, and rub well into the roots of the hair.

2096. French Hair Tonic.

Esprit de Cheveux.

Oleo- balsamic mixture	4 fl. ounces.
Glycerine	5 fl. ounces.
Rose water.....	20 fl. ounces.
Tincture of cantharides	½ fl. ounce.
Carbonate of ammonia.	1 ounce.

Mix, shake thoroughly, let it stand for 1 hour, and filter.

2097. Glycerine Hair Tonic.

Glycerine of 28 degrees B.. 1 quart.
 Borax 1 ounce.
 Rose water..... 2 quarts.
 Alcohol 4 ounces.
 Oil of petit grain..... 2 drams.
 Oil of cloves..... 2 drams.
 Rosemary oil..... 4 drams.

Dissolve the borax in the water, the perfume in the alcohol, and mix all together. It should be clear. Color yellow, if desired, with saffron tincture.

2098. Jaborandi Tonic Hair Wash.

Glycerine 2 ounces.
 Jaborandi leaves..... 4 drams.
 Cinchona bark..... 1 ounce.
 Alcohol 2 ounces.
 Bay rum..... 2 ounces.
 Rose water..... 10 ounces.

Coarsely powder the jaborandi and cinchona; percolate with the alcohol, bay rum, and rose water mixed; add the glycerine to the percolate.

2099. Jaborandi and Quinine Hair Tonic.

Quinine sulphate..... 20 grains.
 Tincture jaborandi..... 1 ounce.
 Glycerine 1 ounce.
 Cologne water..... 2 ounces.
 Bay rum..... 2 ounces.
 Bay rum..... 2 ounces.
 Rose water..... 11 ounces.

2100. Landerer's Hair Tonic.

Cloves 2½ drams.
 Laurel leaves, in coarse powder 5 drams.
 Digested with
 Alcohol 6 ounces.
 Rose water..... 3 ounces.
 Glycerine 2½ drams.
 Mix. After 24 hours, add
 Ether ½ ounce.
 Oil lavender..... 5 drops.
 Filter.

2101. O. K. Hair Tonic.

Era.

Powdered borax.....¼ ounce.
 Tincture cantharides.....½ ounce.
 Aromatic spirits ammonia.½ ounce.
 Glycerine..... 2 ounces.
 Bay rum..... 2 ounces.
 Sage tea, to make..... 1 pint.
 Extract Japanese lilac..... 1 dram.

Take 1 ounce of sage and steep 1 hour in a pint of soft water, filter, dissolve the borax in the tea, then add the other ingredients.

2102. Quinine Hair Tonic.

Era.

Quinine sulphate..... ½ dram.
 Alcohol..... 2 ounces.
 Tincture cantharides..... 1 dram.
 Tincture capsicum... ½ dram.
 Ammonia water..... 4 drams.
 Glycerine..... 1 ounce.
 Bay rum, to make..... 6 ounces.

2103. Compound Quinine and Glycerine Hair Tonic.

Era Prize.

Cologne..... 2 ounces.
 Quinine sulphate..... 15 grains.
 Tincture cantharides..... 2 drams.
 Borax..... 1 dram.
 Ammonia water..... 1 dram.
 Glycerine..... 3 ounces.
 Tincture saccharum..... 1 dram.
 Bay rum, to make..... 1 pint.

Mix and filter.

Tincture saccharum in the above formula is thus made:

White granulated sugar... 1 pound.
 Hot water..... 1 pint.

Put the sugar (without water) into an iron kettle several times the capacity required of it, heat as long as any vapor is given off, and until it is changed to a black, viscid mass, stirring it occasionally, then cool, and while cooling add the hot water, strain the solution, and concentrate by evaporation to a syrupy consistency, or to 1 pint.

2104. Tar Hair Tonic.

Glycerite of tar..... 2 ounces.
 Tincture of cantharides..... 1 dram.
 Oil of lavender..... 1 dram.
 Spirits of ammonia..... 1 dram.
 Bay rum..... 4 ounces.
 Cologne water, sufficient to make..... 1 pint.

2105. Lime Juice and Glycerine for the Hair.

Benne oil..... 16 ounces.
 Lime water..... 24 ounces.

Put the oil in a large mortar, and gradually add the lime water, using an egg beater, and thoroughly mixing them. Perfume with ½ ounce of a mixture of

Oil of bergamot..... 8 drams.
 Oil of lemon..... 4 drams.
 Oil of lavender..... 2 drams.
 Oil of cloves..... 1 dram.

This preparation is put up in 4-ounce bottles, and closed with corks which have been soaked a short time in an alcoholic solution of corrosive sublimate, 1 grain to the ounce, to prevent mold.

2106. Falling of the Hair.

Distilled witch hazel..... 5 ounces.
Corrosive sublimate..... 10 grains.
Use on the scalp twice a day.

2107. Falling of the Hair.

Oleic acid..... 2 ounces.
Spirits of lavender..... 2 drams.
Cologne..... 2 ounces.
Apply to the scalp.

2108. Falling of the Hair.

Tincture of nux vomica..... 1 ounce.
Spirits of rosemary..... 2 ounces.
Alcohol..... 2 ounces.
Apply several times a day.

2109. Falling of the Hair.

Tincture of jaborandi..... $\frac{1}{2}$ ounce.
Lanolin..... 3 drams.
Glycerine..... 2 ounces.
Mix (by the aid of a little soft soap). A
little to be rubbed in every night.

2110. Loss of Hair.

Quinine sulphate..... $\frac{1}{2}$ dram.
Chloral hydrate..... $\frac{1}{2}$ dram.
Camphor..... $\frac{1}{2}$ dram.
Oil cajuput..... 1 dram.
Oil bay..... 1 dram.
Alcohol q. s. add..... 8 ounces.
Rub the chloral and camphor together,
dissolve the quinine in the alcohol, add the
oils, and mix together. Apply a small quan-
tity to the scalp three times a week.

2111. General Thinning and Loss of Hair.

Boric acid..... 2 drams.
Glycerine..... 2 ounces.
Brandy..... 4 ounces.

2112. General Thinning and Loss of Hair.

Corrosive sublimate..... 15 grains.
Glycerine..... 2 fl. drams.
Bay rum..... 4 fl. ounces.
Oil geranium..... 16 minims.
Water q. s. to..... $\frac{1}{2}$ pint.

2113. Hair Lotion.

Tincture capsicum..... $\frac{1}{2}$ ounce.
Tincture soap-tree bark... 1 ounce.
Glycerine..... 2 drams.
Tincture cantharides..... 3 drams.
Spirit rosemary..... $1\frac{1}{2}$ ounces.
Rose water enough to
make..... 8 ounces.
Use on hair night and morning.

2114. Tonic Hair Wash.

Alcohol..... 92 parts.
Glycerine..... 8 parts.
Tannic acid..... 4 parts.
Perfume to suit.

2115. Locoek's Hair Lotion.

Expressed oil of nutmeg 5 fl. ounces.
Olive oil..... 20 fl. ounces.
Stronger water of am-
monia..... 20 fl. ounces.
Spirit of rosemary..... 40 fl. ounces.
Rose water sufficient to
make..... 20 pints.
Gradually pour the combined oils, with
constant stirring, into the stronger water
of ammonia, previously diluted with the
spirit, and afterwards slowly incorporate
the rose water.

2116. Nux Vomica Hair Lotion.

Tincture nux vomica..... 4 drams.
Tincture cantharides..... $2\frac{1}{2}$ drams.
Lanolin..... $2\frac{1}{2}$ drams.
Acetic acid..... 4 drams.
Rose water enough to
make..... 6 ounces.

2117. Hair Wash.

Borax..... 2
Bitter almond water..... 3
Orange flower water..... 5
Rose water..... 40
Olive oil..... 50

2118. Hair Wash.

Spirit ether..... 2 fl. ounces.
Tincture benzoin..... $1\frac{1}{2}$ fl. ounces.
Vanilla..... 1 grain.
Heliotrope 3 grains.
Oil geranium..... 1 minim.
Mix.
One tablespoonful of the wash should be
rubbed with a towel. If the hair become
too dry, lanolin pomade should be used.

2119. Hair Wash.

Alkaline lotion to be used for one week.
Borax 1 dram.
Glycerine 2 drams.
Tincture of cantharides... 6 drams.
Water of ammonia..... 1 oz. av.
Oil of bay..... 4 drops.
Water, to..... 6 ozs. av.
Acid lotion to be used after the alkaline.
Aromatic vinegar..... 2 drams.
Glycerine..... 2 drams.
Alcohol..... 1 oz. av.
Blistering liquid Ph. Br.... 1 dram.
Orange flower water..... 2 ozs. av.
Rose water to..... 6 ozs. av.

2120. Hair Wash.

Aromatic spirit of ammo-
nia..... 1 ounce.
Tincture of cantharides.. 1 or 2 drams.
Glycerine $\frac{1}{2}$ ounce.
Rosemary water..... 11 ounces.
An active stimulant for the scalp.

2121. Brunel's Hair Wash.

Acid salicylic..... 40 grains.
Tincture benzoin..... ½ dram.
Alcohol..... 8 ounces.
Glycerine..... 8 ounces.
Mix.

2122. Hair Wash Powder.

Borax..... 1 ounce.
Flower of camphor..... ½ dram.
Oil of rosemary..... 10 drops.
Mix. To make 1 pint.

2123. Saponaceous Hair Wash.

Soft soap..... ½ ounce.
Diluted alcohol..... 1 ounce.
Oil rosemary..... 25 minims.
Oil lavender..... 8 minims.
Dissolve and add
Water 8 ounces.
Mix and filter.

2124. Saponaceous Hair Wash.

Soft soap..... 1 ounce.
Liquor potassa..... 2 ounces.
Alcohol 2 ounces.
Perfume, quantity sufficient.
Water 1 pint.

Dissolve the soap by the aid of heat in water; then add the potash, and when cold, the spirit and perfume.

2125. Hair Wash in Seborrhoea Capitis.

(Particularly in women with long hair.)
Ether spirits..... 1,000 parts.
Benzoin tincture..... 100 parts.
Vanillin..... 1 part.
Heliotropin... 3 parts.
Geranium oil..... 2 parts.

Use externally. Pour a tablespoonful on the head once a day, after washing (or without previously washing), and rub in with a fine cloth. (Inflammable.)

2126. Arnica Hair Wash.

Elder water..... ½ pint.
Sherry wine..... ½ pint.
Tincture arnica..... ½ fl. ounce.
Alcoholic ammonia..... 1 fl. dram.

SHAMPOOS.**2127. Shampoo Cream.**

Soap (fine, white, in shreds), ½ ounce, rose water, 1 fluid ounce, solution of ammonia, 1 fluid ounce, alcohol or bay rum, ½ fluid ounce, rain water, 8 fluid ounces. Dissolve the soap in the rain water by heat, and when nearly cool add the ammonia, rose water and alcohol, stirring constantly.

2128. Dry Shampoo.

Borax 4 drams.
Carbonate of ammonia.... 4 drams.
Tincture of senega..... 1 dram.
Essence of ratafia..... 10 drops.
Rectified spirit..... 5 ounces.
Water to..... 1 pint.
Mix. This may be used without water.

2129. Egg Shampoo.

Ammonia water..... 3 fl. drams.
Cologne water..... 3 fl. drams.
Alcohol 5 fl. ounces.
Water 5 fl. ounces.
Whites of eggs, as many as desired.

The whites of eggs (about 2) are thoroughly beaten up previous to being mixed with the water and water of ammonia; the remaining ingredients are added in their order and the whole stirred briskly.

2130. Egg Shampoo.

New England rum..... 15 ounces.
Bay rum..... 10 ounces.
Glycerine 1 ounce.
Borax 2 ounces.
Whites of egg..... No. 2.

Difficulty may be experienced in dissolving 2 ounces of borax in the alcoholic liquids; it is recommended to incorporate the borax in fine powder with glycerine, and to add the bay rum and New England rum gradually and with constant stirring to the mixture. The white of egg is well beaten and added to the solution of borax, and the whole stirred thoroughly until an even mixture results.

2131. Egg Shampoo.

Yolk of 1 egg, rose water, 1 pint, eau de cologne, 1 fluid ounce, transparent soap, 1 dram, carbonate of potash, 1 dram, rectified spirit, 2½ ounces. Dissolve the potash in half the rose water over a water bath, adding at the same time the saffron. Then mix the other half, and slowly rub down with the yolk of egg. Lastly add the spirit and eau de cologne.

2132. Elite Shampoo.

Hungary water 1 pint.
St. Thomas bay rum..... 8 fl. ounces.
Tincture of quillaja..... 4 fl. ounces.
Rosemary water 4 fl. ounces.
Glycerine 2 fl. ounces.
Bicarbonate of ammonia. 1 ounce.
Borate of soda 1 ounce.
Tincture of cantharides.. 1 fl. dram.

To the rosemary water, in which has been dissolved the borax and ammonia, add the rest of the ingredients and mix thoroughly by agitation. The hair is moistened with the liquid and rubbed vigorously to produce a copious lather.

2133. Shampoo Liquid.

Fresh eggs 3.
 Splrit of soap 1½ fl. ounces.
 Carbonate of
 potassium 160 grains.
 Water of ammonia.... 160 drops.
 Oil sugar of coumarin. 8 grains.
 Oil of rose 2 drops.
 Oil of bergamot 2 drops.
 French geranium oil.. 1 drop.
 Almond oil 1 drop.
 Rose water 27 fl. ounces.

Thoroughly beat the three eggs, and then dilute with the rose water. Then add the other ingredients.

Oil sugar of coumarin is prepared by triturating 1 part of coumarin with 999 parts of sugar of milk.

2134. Shampoo Liquid.

Fluid extract of soap
 bark 5 fl. ounces.
 Glycerine 2½ fl. ounces.
 Cologne water 5 fl. ounces.
 Alcohol 10 fl. ounces.
 Rose water 15 fl. ounces.

2135. Shampoo Liquid.

Soft soap 1½ ounces.
 Carbonate of
 potassium 2½ drams.
 Alcohol 3 fl. ounces.
 Essence of jockey club ½ fl. ounce.
 Water enough to make 25 fl. ounces.

2136. Shampoo Liquid.

Solution of potassa..... 4 fl. ounces.
 Borax 1 ounce.
 Bay rum ½ fl. ounce.
 Tincture of quillaja..... ½ fl. ounce.
 Water enough to make. 16 fl. ounces.
 Scent according to taste.

2137. Shampoo Mixture.

Fluid extract soap-tree
 bark 2 fl. ounces.
 Cologne 1 fl. ounce.
 Bay rum ½ fl. ounce.
 Glycerine ½ fl. ounce.
 Water 12 ounces.
 Add water last.

2138. Shampoo Paste.

Melt 20 parts of lard in a salt bath at 213 degrees F; then let 5 parts of caustic potash lye of 36 degrees B run in very slowly during constant stirring with a wooden paddle; when the paste becomes thick, 5 parts more of lye are added in the same manner. After several hours stirring the mixture becomes firm and is finished.

2139. Shampoo Powder.

Borax, fine powder..... 1½ ounces.
 Soda, calcined..... 3 ounces.
 Quillaja..... 1½ ounces.
 Perfume, q. s.

Mix. To use, dissolve in warm water.

2140. Salicylic Acid Shampoo.

Salicylic acid..... 25 grams.
 Glycerine..... 50 grams.
 Alcohol, of 68 per cent.... 950 grams.
 Oil of wintergreen..... 5 drops.
 Oil of rose..... 1 drop.
 Oil of neroli..... 1 drop.

Mix and filter. Wash the head well with warm soapsuds, then with pure warm water, and dry it with a towel. Then pour 2 tablespoonfuls of the shampoo into a wine glass, fill with warm water, and apply the mixture thoroughly by means of a small sponge to the scalp and hair.

2141. Salicyline Shampoo.

Rosemary water..... 18 fl. ounces.
 French rose water..... 8 fl. ounces.
 St. Thomas bay rum.... 6 fl. ounces.
 Carbonate of ammonia.. ½ ounce.
 Carbonate of soda..... ½ ounce.
 Salicylic acid..... 1 grain.

To the rosemary water, in which have been dissolved the borax and ammonia, add the rest of the ingredients and mix thoroughly by agitation.

The hair is moistened with the liquid and rubbed vigorously to produce a copious lather.

2142. Sea Foam Shampoo.

Mix together 2 ounces glycerine, 2 drams aromatic spirits of ammonia, 4 ounces alcohol, and make up the measure of 1 pint with water.

2143. Sea Foam.

Glycerine..... 1 ounce.
 Ammonia..... 2 ounces.
 Alcohol..... 16 ounces.
 Water enough to make... 32 ounces.

2144. Sea Foam.

Tincture arnica..... 1 dram.
 Tincture cantharides..... 2 drams.
 Water ammonia..... 3 drams.
 Alcohol..... ½ pint.
 Soft water..... ½ pint.

2145. Sea Foam (Extra Soapy).

Carbonate of potash..... ½ ounce.
 Powdered castile soap..... 1 ounce.
 Water..... 8 ounces.
 Tincture of quillaja..... 1 ounce.
 Oil of bay..... 5 minims.
 Alcohol enough to make... 1 pint.

2146. Sea Foam (Dry Shampoo).

Carbonate of ammonia..... 1 dram.
 Carbonate of potash..... 2 drams.
 Tincture of cantharides.... 1 ounce.
 Water..... 5 ounces.
 Jamaica rum..... 1 pint.
 Alcohol enough to make.... 2 pints.

2147. Sea Foam (Dry Shampoo).

Alcohol..... 7 ounces.
 Water..... 10 ounces.
 Ammonia water..... 1 ounce.
 Cologne..... 1 ounce.
 Tincture green soap..... 4 drams.

Use as a shampoo and wash off with clear water.

2148. Sea Foam, Liquid Shampoo.

Bay rum..... 2½ pints.
 Water..... ½ pint.
 Glycerine..... 1 ounce.
 Tincture of cantharides.... 2 drams.
 Carbonate of ammonium.. 2 drams.
 Borax..... ½ ounce.

2149. Snow-Drift Shampoo.

Carbonate of potash..... 3 ounces.
 Ammonia water..... 1 ounce.
 Soap bark..... 4 ounces.
 Orange flower water..... 1 pint.
 Soft water..... 7 pints.

Boil the soap bark with the water and filter or strain. When cold add the carbonate of potash and orange flower water, and finally the ammonia water.

2150. Tonic Shampoo.

Tincture of quillaja..... 10 fl. ounces.
 Eau de cologne..... 4 fl. ounces.
 Glycerine 3 fl. ounces.
 Fluid extract of pilocarpus 4 fl. drams.
 Sulphate of quinine..... 30 grains.
 French orange flower water, enough to make 2 pints.

Dissolve the quinine in the eau de cologne and tincture of quillaja with the aid of heat; then add the remaining ingredients and filter if necessary.

SHAVING PASTES, ETC.

2151. Shaving Cream.

Almond oil..... 1 ounce.
 Common resin..... 2 drams.
 Carbonate of potash..... 1½ drams.
 White Windsor soap..... 1 ounce.
 Boiling water..... 5 ounces.

Melt the resin in the oil by aid of heat. Separately dissolve the soap and potash in the water, and add the oil and resin to

this, continuing to heat on a water bath until, after stirring well, the mixture is homogeneous; transfer to a warm mortar, stir and add:

Glycerine 6 drams.
 Essential oil of almonds.. 10 drops.
 Oil of bergamot..... 30 drops.
 Rectified spirit..... 1 ounce.
 Rose water..... 6 ounces.

Mix well, adding more rose water if required, when cold.

2152. Shaving Cream.

Curd soap..... 8 ounces.
 Almond oil..... 2 ounces.
 Glycerine 1 ounce.
 Spermaceti ½ ounce.
 Carbonate of potash..... ¼ ounce.
 Water 16 ounces.

Cut the curd soap into shreds and dissolve it by the aid of a water bath in 14 ounces of water. Dissolve the spermaceti in the almond oil, and while warm mix with it the glycerine, potash and remainder of the water; transfer to a warm mortar, gradually and steadily incorporate the warm soap solution and continue to stir until a smooth paste is formed. With this incorporate a suitable perfume.

2153. Shaving Cream.

Castile soap..... 1 ounce.
 Rose water..... 4 ounces.
 Oil of almonds..... ½ ounce.
 Theobroma oil..... ½ ounce.
 Tincture of benzoin..... 1 dram.
 Oil of rose geranium..... 5 drops.
 Oil of bitter almonds..... 5 drops.
 Glycerine, quantity sufficient.

Digest the soap and water on a water bath, add the 2 fixed oils (previously melted together), and incorporate the tincture. Finally, add the perfumes and enough glycerine to bring to the proper consistence.

2154. Shaving Cream.

Melt on a water bath 1 pound of finest lard, free from salt, stir constantly, and when well melted add ¼ pound of potash lye 36 degrees, continuing the stirring and not elevating the temperature. Saponification is gradually effected and stirring must be continued until grains of soap sink to the bottom, and an oily layer tends to rise. Then another ¼ pound of lye is added, and stirring is continued for perhaps 2 or 3 hours. The compound becomes too set for stirring, and will then need beating, finally allowing the mixture to cool gradually, but not ceasing beating. The soap is transferred to a mortar, and some perfume, as essence of almond or benzoin, is added and well beaten in.

2155. Shaving Cream.

Cream d'amande.....	30 parts.
Oil of almonds.....	50 parts.
Glycerine.....	150 parts.
Rectified sprit.....	150 parts.
Oil of rose geranium.....	3½ parts.
Oil of bergamot.....	3½ parts.
Oil of neroli.....	3½ parts.
Oil of citronella.....	3½ parts.
Distilled water.....	725 parts.

2156. Shaving Cream.

Curd soap.....	2 ounces.
Simple ointment.....	½ ounce.
Oil of rose.....	15 minims.
Oil of lavender.....	5 minims.
Alcohol.....	1 ounce.
Potassium carbonate.....	2 drams.

Water, sufficient quantity.

Dissolve the soaps in 10 ounces of water by the aid of heat. Melt the simple ointment and while warm mix with it the carbonate of potassium dissolved in an ounce of warm water; transfer to a warm mortar, gradually and steadily incorporate the warm soap solution, and continue to stir until a smooth paste is formed. With this incorporate the perfume dissolved in alcohol, diluted with an ounce of water.

2157. Shaving Cream.

Cacao butter.....	½ ounce.
Oil of almonds.....	½ ounce.
Glycerine	1 ounce.
Powdered white castile soap	½ ounce.
Oil of rose.....	2 drops.
Oil of neroli.....	4 drops.
Oil of bitter almonds.....	5 drops.
Rose water to.....	8 ounces.

Apply and allow to remain for a few minutes before wiping off with a soft cloth.

2158. Shaving Cream.

White soap.....	1 part.
Rose water.....	4 parts.

Dissolve with heat, and add to

Almond oil.....	½ part.
Spermaceti ointment.....	½ part.

Mix in warm mortar, and when it cools add glycerine and water, of each ½ part; perfume with bitter almond oil or lemon.

2159. Shaving Cream for Collapsible Tubes.

Lard	7 parts.
Caustic potassa.....	1 part.
Water	3 parts.

Glycerine, sufficient quantity.
Perfume, sufficient quantity.

Melt the lard in a porcelain vessel over a salt-water bath; dissolve the potassa in the water, and run the lye formed, very slowly, into the melted grease, stirring

thoroughly all the time, until saponification is completed. Then add the requisite perfume, and sufficient glycerine to render the mass thin enough to be adapted for use in tubes. The glycerine will aid in keeping the cream soft.

2160. Shaving Lotion.

To be applied to the face after shaving.—Stir 7 parts tragacanth in 700 parts warm water, allow to stand two or three days with occasional stirring until completely dissolved, when 5 parts menthol dissolved in 30 parts alcohol and 21 parts glycerine are added.

2161. Menthol Cream for Barbers.

Tragacanth	6 parts.
Warm water.....	576 parts.
Glycerine.....	18 parts.
Alcohol	24 parts.
Menthol.....	1 part.

This cream is applied as a cooling lotion after shaving, having first been diluted with aromatic water.

2162. Shaving Paste.

White soap.....	4 ounces.
Spermaceti.....	½ ounce.
Salad oil.....	½ ounce.

Melt together and stir till cold. Scent at will. When properly applied, this paste produces a good lather with either hot or cold water, which does not dry on the face.

2163. Shaving Paste.

Take Naples soap, 1 pound; Castile or Marseilles soap, ½ pound; honey, ½ pound; essence of ambergris, oils of cassia and nutmeg, of each 20 to 30 drops. Mix these ingredients well together in a mortar, adding a little rose water, until a perfectly homogeneous paste is formed.

2164. Shaving Paste.

Spermaceti, 45; almond oil, 45; soft soap, 350. Melt, and stir till cool. Perfume to taste.

2165. Shaving Powder.

Powdered soap.....	1.250 kilograms.
Sodium carbonate.....	0.150 kilograms.
Wheat starch.....	0.240 kilograms.
Orris root.....	0.080 kilograms.
Oil bergamot.....	6. drops.

Instead of the orris root, the same weight of powdered quillaja and a very little oil of orris may be used. An addition of 10 to 20 grams of glycerine will render the powder milder in use.

2166. Shaving Soap Powder.

Powdered curd soap..... 2 pounds.
 Coumarin..... 1 grain.
 Oil of bergamot..... 5 drops.
 Oleo-balsamic mlxture..... 5 drops.
 Oil of wintergreen..... 2 drops.

This powder can be made antiseptic by the addition of 3 per cent of salol.

2167. Barber's Itch.

Resorcin..... 1½ drams.
 Glycerine..... 3 drams.
 Rose water..... ½ ounce.
 Lac. sulphur..... ½ ounce.
 Triple extract lavender... ½ ounce.
 Bay rum q. s. to make... 4 ounces.

Mix. Apply to parts affected with soft sponge twice a day.

2168. Barber's Itch.

The seat of the affection to be closely shaved every day, and the following ointment rubbed in twice a day:

Acid tannic..... 45 grains.
 Sulphur, precipitated..... 1½ drams.
 Zinc oxide..... 4 drams.
 Vaseline..... 1 ounce.

Use twice daily.

In a month nothing remains of the eruption but a very slow disappearing erythema.

COMEDONES AND BLACK-HEADS.

2169. Comedones, to Remove.

Ether..... 1 fl. ounce.
 Carbonate of ammonia... 20 grains.
 Water, to make..... 2 fl. ounces.
 Apply twice a day.

2170. Comedo Wash.

Potassium carbonate..... 3 drams.
 Distilled water..... 3½ ounces.
 Oil cinnamon..... 2 drops.
 Oil rose..... 1 drop.

To be used with a damp sponge for hypersecretion of fat from the skin. Useful in comedo and acne.

2171. Comedones.

Dialyzed iron, 30 grams; glycerine and castor oil, each 60 drams. One or two teaspoonfuls to be taken morning and evening; or, cod liver oil, 15 grams; sulphuric ether, 20 drops, for one dose—three times daily.

2172. Comedones (Blonde's Formula).

Maglster blsmuth..... 3 parts.
 Acid boric, pulverized..... 3 parts.
 Radix ratanh. pulverized... 1 part.
 Tragacanth..... 2 parts.

A dusting powder.

2173. Comedones (Unna).

Solution hydrogen peroxide 2 ounces.
 Vaseline 2 ounces.
 Lanolln (anhydrous)..... 1 ounce.
 Acetic acid..... 1 dram.

Mix and perfume.

2174. Pomade for Comedones.

Kaolin 4 parts.
 Glycerine 3 parts.
 Acetic acid..... 2 parts.

With or without the addition of a small quantity of some ethereal oil. With this pomade cover the parts affected in the evening, and if need be during the day. The comedones can be easily expressed after several days, most of them coming out by washing the parts with pumice stone soap.

2175. Acne, Pimply.

Wash the affected parts with warm suds; rub well, and frequently in so doing express the contents of the pimples and apply the following mixture:

Flowers of sulphur..... 25 grains.
 Tincture of camphor... 1½ drams.
 Lime water..... 2½ ounces.

2176. Acne.

In place of the above the following pomade may be used:

Sulphur 25 grains.
 Carbolic acid..... 10 drops.
 Potassium carbonate..... 25 grains.
 Lard 1 ounce.

Mix, and make an ointment.

2177. Blackheads.

Thymol 10 grains.
 Boric acid..... 120 grains.
 Tincture witch hazel... 1 fl. ounce.
 Rose water..... 4 fl. ounces.

Mop it well over the surface twice daily.

2178. Blackheads.

Oxide of zinc..... 1 dram.
 Resorcin 1 dram.
 Starch 1 dram.
 Petrolatum (yellow)..... 2½ drams.

Apply a thin coating to the affected parts, letting it remain on 12 hours, and rub off with oil. It is best applied at bedtime.

2179. Blackheads and Pimples.

Wash the face twice a day at least, using a loofah and soap liberally, and preferably a superfatted soap. Touch each spot with lano-creolin at bedtime. First thing in the morning take

Tartarated soda..... 40 grains.
 Chlorate of potash..... 3 grains.
 Sulphate of magnesia..... 30 grains.
 Peppermint water to..... 1 ounce.

For 1 dose.

2180. Local Application for Pimples.

Rose water..... 8 ounces, 2½ drams.
 Spirits camphor..... 1 ounce.
 Sulphur, precipitated..... 2½ ounces.
 Acacia, pulverized..... 2 drams.

2181. Pimples.

Ointment of oleate of zinc 1 ounce.
 Ointment of rose water.... 1 ounce.
 Camphor 10 grains.
 Apply on retiring for the night.

2182. Pimples.

Beta naphthol..... 5 grains.
 Oil of chamomile..... 5 drops.
 Ointment of benzoated oxide
 of zinc..... 1 ounce.
 Use on the surface.

2183. Removal of Pigment Spots.

Cacao butter..... 2¼ ounces.
 Castor oil..... 2¼ ounces.
 Zinc oxide..... 45 grains.
 Ammoniated mercury.... 2 grains.
 Oil of roses, sufficient quantity.
 To be applied night and morning.

2184. Plugs or Grubs of the Skin.

Boracic acid..... ½ dram.
 Spirits of rosemary..... 1 ounce.
 Water 3 ounces.
 Use with friction on the skin.

2185. Plaster for Removing Moles.

Take tartar emetic in impalpable powder, 15 grains; soap plaster, 1 dram, and beat them to a paste. Apply this paste to nearly a line in thickness (not more), and cover the whole with strips of gummed paper. In 4 or 5 days the eruption or supuration will set in, and in a few days leave in the place of the mole only a very slight scar.

FRECKLES, SUNBURN, ETC.**2186. Freckle Pomade.**

Elder flower ointment, 1 ounce; sulphate of zinc (levigated), 20 grains; mix by porphyzation, or by trituration in a wedge-wood mortar. The above applied night and morning, is excellent for either cold or summer freckles.

2187. Freckle Ointment.

Flour of mustard..... 3 ounces.
 Lemon juice to make a thick paste,
 sufficient quantity.
 Oil of almonds..... ½ fl. ounce.

2188. Freckles and Yellow Discolorations of the Skin.

Oleate of copper..... 10 to 20 grains.
 Ointment of oxide of zinc.. ½ ounce.
 Rub into the spots, night and morning.

2189. Bismuth Ointment for Freckles.

Subnitrate of bismuth..... 2 drams.
 Simple ointment..... 2 ounces.
 Apply to the skin at night and remove in the morning with a little cold cream previous to washing.

2190. Rough, Pimply Neck and Limbs.

Sublimed sulphur..... 1 dram.
 Oil of eucalyptus..... 5 drops.
 Ointment of oxide of zinc... 1 ounce.
 Ointment of rose water..... 1 ounce.
 Use once a day on the skin. Wash off the parts once or twice a week with the tincture of green soap, cleansing them with hot water, after which renew the application of the above ointment.

2191. To Remove Summer Freckles.

White precipitate..... 4 parts.
 Subnitrate of bismuth..... 4 parts.
 Glycerite of starch..... 15 parts.
 Apply every second day to the freckles.

2192. Freckles.

Wash with the following lotion morning and evening:

Sulpho-carbolate of zinc.... 4 parts.
 Glycerine 60 parts.
 Alcohol 30 parts.
 Orange flower water..... 45 parts.
 Rose water..... 230 parts.

2193. Freckle Lotion.

Chloride of ammonium.... 1 dram.
 Hydrochloric acid..... 1½ drams.
 Glycerine..... 1 ounce.
 Lait virginal..... 1½ ounces.
 Mix. Apply to the freckles morning and evening with a camel's hair brush.

2194. Tan and Freckles.

Potassium carbonate..... 3 drams.
 Sodium chloride..... 2 drams.
 Orange flower water..... 2 ounces.
 Rose water..... 8 ounces.
 Use as a lotion.

2195. Camphorated Sulphur Lotion.

Rose water..... 250 parts.
 Camphor..... 30 parts.
 Precipitated sulphur..... 20 parts.
 Gum arabic..... 8 parts.
 This remains a homogeneous mixture for a considerable length of time, and when in the course of time the insoluble constituents have separated, may again be made uniform by gentle agitation.

2196. Hardy's Freckle Wash.

Bichloride of mercury..... 2 grains.
 Sulphate of zinc..... 2 grains.
 Acetate of lead..... 2 ounces.
 Distilled water..... 4 ounces.

2197. Russian Remedy for Freckles.

Sulphocarbolate of zinc.... 1 dram.
 Oil of lemon..... 1 dram.
 Alcohol..... 5 drams.
 Collodion..... 45 drams.

Mix. To be applied with a camel's hair brush.

2198. Freckle Lotion.

Potassium cyanide..... 10 grains.
 Honey (pure)..... 4 drams.
 Glycerine..... 2 drams.
 Rose water q. s..... 1½ fl. ounces.

Apply night and morning.

2199. Freckle Lotion.

Angelica root 1¼ ounces.
 Black hellebore root ... 1¼ ounces.
 Storax ¾ ounce.
 Oil of bergamot 150 grains.
 Oil of citron 150 grains.
 Alcohol 2 quarts.

Macerate for a week, and filter.

2200. Floral Freckle Lotion.

French rose water 640 parts.
 Triple extract of rose..... 100 parts.
 Extract of jasmine 100 parts.
 Glycerine..... 100 parts.
 Extract of violets 48 parts.
 Hydrochloric acid, diluted. 10 parts.
 Bichloride of mercury 2 parts.

2201. Lait Virginal.

Powdered tragacanth 6 grains.
 Glycerine ½ ounce.
 Rose water 9 ounces.

Mix and add—

Tincture of benzoin 2 drams.

This is said to make a nice white emulsion and leaves no greasy strains upon the skin.

2202. Tan and Freckles, Chevasses.

Rose water 6 ounces.
 Glycerine ½ ounce.
 Bitter almond water 2½ drams.
 Tincture benzoin 2½ drams.
 Borax 1½ drams.

Rub the borax with the glycerine, gradually adding the rose and almond water; lastly add the tincture benzoin, agitating constantly. Apply night and morning.

2203. Freckle Lotion.

Borax 60 grains.
 Potassium chlorate 30 grains.
 Glycerine 2 fl. drams.
 Alcohol 1 fl. dram.
 Rose water to make.... 3 fl. ounces.

Apply with a soft sponge several times a day.

2204. Freckle Milk.

Camphor 1¼ ounces.
 Ammonium chloride ... ¾ ounce.
 Corrosive sublimate ... 150 grains.
 Albumen 3½ ounces.
 Rose water 2 pounds.

Use with care.

2205. Milkwash for Removing Sunburn and Freckles.

Buttermilk (or sour milk). 4 ounces.
 Grated horseradish ½ ounce.
 Corn meal 1½ ounces.

Make into a thin paste, spread between cheesecloth or thin muslin, and apply to the face at night.

2206. Milkwash for Removing Sunburn and Freckles.

Buttermilk (or sour milk). 4 ounces.
 Flowers of sulphur..... 2 drams.
 Oatmeal 1½ ounces.

Make into a thin paste, spread between cheese cloth or thin muslin and apply at night.

2207. Freckles and Yellow Discolorations of the Skin.

Corrosive sublimate..... 10 grains.
 Distilled witchhazel..... 2 ounces.
 Rose water..... 2 ounces.

Mop over the spots.

2208. To Prevent Wrinkles.

Tannin, 1 ounce; glycerine, 2 fluid ounces; rose water, 5 fluid ounces. Applied with camel's hair brush.

2209. Wrinkles.

Wrinkles caused by facial contractions cannot be removed while their cause continues in operation. Withering and puckering of the skin, the result of years, may be remedied by:

Alum 1 dram.
 Glycerine 1 ounce.
 Water 1 pint.

To be used three times daily as a wash.

2210. Wrinkles.

Glycerine 2 drams.
 Tannin 1 dram.
 Rectified spirit..... 1 dram.
 Water 4 ounces.

To be used as a wash three times daily.

CACHOUS FOR THE BREATH.

2211. Cachous.

Gum acacia..... 1½ ounces.
 Catechu, powdered..... 2¼ ounces.
 Licorice juice..... 1¼ pounds.
 Cascarilla, powdered.... ¾ ounce.
 Mastic, powdered ¾ ounce.
 Orris root, powdered.... ¾ ounce.
 Oil cloves..... 75 grains.
 Oil peppermint..... ½ ounce.
 Tincture ambergris..... 75 grains.
 Tincture musk..... 75 grains.

Boil the solids with water until a pasty mass results, which becomes firm on cooling, then add the aromatics, roll into pills, and cover with silver foil.

2212. Cachous.

Powdered extract licorice 100. grams.
 Gum arabic 10.0 grams.
 Tragacanth 2.5 grams.
 Gently heat, mix and add
 Oil anise 20 drops.
 Then thoroughly triturate with
 Pulverized sugar 15.0 grams.

2213. Cachou Aromatise.

Mace 216 grains.
 Cardamom 154 grains.
 Vanilla 283 grains.
 Cloves 77 grains.
 Orris root 309 grains.
 Musk 15 grains.
 Oil neroli 20 drops.
 Oil cinnamon 30 drops.
 Oil lemon 40 drops.
 Oil peppermint 60 drops.
 Extract licorice, quantity sufficient.
 Chocolate 3½ av. ozs.

2214. Aromatic Cachous.

Extract of licorice 3 ounces.
 Oil of cloves 1½ drams.
 Oil of cinnamon 15 drops.
 Mix and divide into 1 grain pills and silver them.

2215. Aromatic Cachous.

Chocolate powder 1½ ounces.
 Ground coffee 1½ ounces.
 Prepared charcoal 1 ounce.
 Sugar 1 ounce.
 Vanilla (pulverized with
 the sugar) 1 ounce.
 Mucilage, quantity sufficient.
 Make into lozenges of any form.

2216. Aromatic Cachous.

Extract of licorice 100 parts.
 Dissolved in
 Water 100 parts.
 To which is added
 Acacia, powdered 30 parts.
 Licorice juice 30 parts.
 And the whole evaporated on a water
 bath to the consistence of an extract,
 when of the proper consistence incorporate:

Mastic, powdered 2 parts.
 Cascarilla, powdered 2 parts.
 Charcoal, powdered 2 parts.
 Orris, powdered 2 parts.
 And finally
 Tincture of musk 5 parts.
 Essence of peppermint 2 parts.
 Tincture of ambergris 5 drops.
 The resulting mass is rolled out on an
 oiled marble slab, and after it has cooled

sufficiently any excess of oil is removed
 with blotting paper; the mass is then
 coated with silver leaf, and cut into squares
 of a suitable size and shape. (Looks like
 Piesse's.)

2217. Aromatic Cachous.

Extract of licorice 3 ounces.
 Water 3 ounces.
 Dissolve by heat in a water bath, and
 add

Catechu 1 ounce.
 Gum arabic ½ ounce.

Evaporate to the consistence of an ex-
 tract, and add in powder, ½ dram each
 of mastic, cascarilla, charcoal and orris,
 remove from the fire and add oil of pep-
 permint ½ dram, essence of ambergris
 and essence of musk each 5 drops; roll it
 flat on an oiled marble slab, and cut it
 into very small lozenges. Or it may be
 rolled into small pills and silvered.

2218. Aromatic Cachous.

Catechu 7 drams.
 Orris powder 40 grains.
 Sugar 3 ounces.
 Oil of rosemary (or oil of
 peppermint, cloves, or
 cinnamon) 4 drops or q. s.
 Proceed as for the last.

2219. Prince Albert Cachous.

Mace 75 grains.
 Orris root 75 grains.
 Licorice root 75 grains.
 Cardamom seed 15 grains.
 Cloves 8 grains.
 Vanilla ⅓ grain.
 Coumarin ½ grain.
 Musk 1-12 grain.
 Oil peppermint 3 drops.
 Oil rose 2 drops.
 Oil lemon 2 drops.
 Oil neroli 2 drops.
 Oil Ceylon, cinnamon 1 drop.
 Mucilage, sufficient.

Mix and form into hard pills weighing
 ¾ grain and coat with silver.

2220. Pastilles (Aromatic).

Roasted coffee 75 parts.
 Wood charcoal 25 parts.
 Boracic acid 25 parts.
 Sugar 60 parts.

Pulverize the ingredients separately, very
 finely, mix and add sufficient vanilla
 to perfume to the taste. Finally, add suf-
 ficient gum arabic mucilage to make a
 mass. Divide into pastilles, lozenges, or
 little pills.

FOR THE FEET.

2221. Perspiring Feet.

Potassium permanganate.. 20 grains.

Water 2 ounces.

Apply to the soles of the feet and between the toes on retiring.

2222. Perspiring Feet.

Chloral hydrate..... 2 scruples.

Water..... 1 ounce.

Apply to the soles of the feet and between the toes on retiring.

2223. Lotion for Foetid Feet.

Burnt alum..... 30 grains.

Boracic acid..... 30 grains.

Water or rose water..... 1 ounce.

Apply with soft sponge without rubbing just as shoes and stockings are removed, while the feet are yet moist. This is quite necessary, as also the care not to rub. Let this be repeated every two or three days, in the evening.

2224. Perspiration of the Feet.

Lead acetate..... 1 dram.

Vinegar..... 1 ounce.

Methylated spirit..... 2 ounces.

Water, enough to make.... 20 ounces.

Apply to feet as a lotion.

2225. Perspiring Feet.

A 5 per cent solution of chromic acid applied to the feet after bathing and thoroughly drying them. Apply with a brush. Two or three treatments are sufficient.

2226. Perspiring Feet.

Talc 10 parts.

Alum 2 parts.

Largely used in Swiss army, preferable to chromic acid, and applicable even for sore feet.

2227. Sweating Feet.

Naphthalin in scales is simply strewn into the stockings or shoes.

2228. Tender Feet.

Oleate of zinc, powdered.... 1 ounce.

Boric acid, powdered..... 2 ounces.

French chalk, powdered.... 3 ounces.

2229. Foot Powder.

A powder composed of salicylic acid, soap, talc and starch. The powder renders the feet firm, induces an agreeable softness, and removes all unpleasant odor, its action being to prevent the formation of butyric, valerianic, and other acids of the same family, which injure the feet.

2230. Powder for the Feet.

Salicylic acid..... 2.5

Alum 5.0

Starch 20.0

Oil bergamot..... 10 drops.

Alcohol 5.0

Mix, and add:

Talcum 70.0

PART IV.

Veterinary Remedies—Horses, Cattle, Swine, Dogs, etc.

2231. Ball for Appetite.

Equal weights of asafoetida, saffron, bayberries, and aloes, made into a mass with extract of gentian. Dose, 1 ounce.

2232. Antispasmodic Ball.

Opium, 1 dram; powdered belladonna, 10 grains; linseed meal, 3 drams; palm oil or treacle, q. s. Twice or thrice a day in spasm of the neck of the bladder.

2233. Cordial Balls.

Coriander seed 8 ounces.

Caraway seed 8 ounces.

Gentian, in powder 8 ounces.

Ginger 4 ounces.

Oil of aniseed ½ ounce.

Honey or palm oil enough to form a mass.

Cordial, warming and stomachic. Dose, 1½ ounces.

2234. Stimulating Diaphoretic Ball.

Emetic tartar, 1 dram; ginger, 2 drams; camphor, $\frac{1}{2}$ dram; opium, 2 scruples; oil of caraway, 15 drops; honey to form a ball. For hide-bound and unhealthy coat without any other disease.

2235. Cordial Balls.

Aniseed, caraway, cardamom, each 1 ounce; saffron, 2 drams; sugar candy, 4 ounces; licorice powder, $1\frac{1}{2}$ ounces; Spanish juice (softened with water), 2 ounces; oil of aniseed, $\frac{1}{2}$ ounce; wheat flour, q. s. Dose, 1 ounce to $1\frac{1}{2}$ ounces.

2236. Cordial Balls.

Aniseed, caraway, ginger, each 8 ounces; gentian, grains of paradise, cumin, and turmeric, each 4 ounces; cassia, 2 ounces; oil of caraway, 2 drams; treacle to form a mass. Dose, $1\frac{1}{2}$ ounces. To keep it moist add 2 ounces of acetate of potash.

2237. Pectoral Cordial Balls.

For old coughs, fenugreek, aniseed, cumin, safflower, elecampane, coltsfoot, sulphur, of each 3 ounces; licorice juice, 1 ounce; olive oil, 8 ounces; honey, 8 ounces; Genoa treacle, 12 ounces; oil of aniseed, 1 ounce; wheat meal, $1\frac{1}{2}$ pounds, or q. s. One ball, or 2 ounces (dissolved in water or warm wort), every day for 12 or 15 days if required.

2238. Cough Ball.

Arsenic for coughs in horses may be given in 3-grain doses three times a week for a fortnight, then miss a week and resume for a fortnight.

2239. Cough Ball.

Ipecac, powdered 1 dram.
Camphor, powdered 2 drams.
Licorice, powdered 1 dram.
Honey to form a ball.

To be given every morning.

2240. Cough Ball.

Squill 2 drams.
Gum ammoniac 4 drams.
Ipecac 4 drams.
Opium 4 drams.
Allspice 1 ounce.
Balsam of sulphur 4 ounces.
Castile soap 2 ounces.

Treacle to form a mass for 6 balls. One twice a day.

2241. Cough Ball.

Aloes, 2 ounces; digitalis (powdered), 1 ounce; common mass, 13 ounces. Dose, 1 ounce twice a day.

2242. Cough Ball.

Emetic tartar, $\frac{1}{2}$ dram; digitalis, $\frac{1}{2}$ dram; nitre, $1\frac{1}{2}$ drams; tar enough to form a ball. Every night.

2243. Cough Ball.

Powdered squill, 1 dram; gum ammoniac, 3 drams; opium, $\frac{1}{2}$ dram; syrup to form a ball.

2244. Cough Ball.

Ipecacuanha, 1 dram; camphor, 2 drams; licorice powder, 1 dram; honey to form a ball. To be given every morning.

2245. Cough Ball.

Sulphur, $\frac{1}{2}$ ounce; asafoetida, 1 ounce; licorice powder, 1 ounce; Venice turpentine, 1 ounce; for 4 balls. One every night for 4 times.

2246. Cough Ball.

Calomel, 26 grains; gum ammoniacum, 2 drams; balsam of Peru, 1 dram; powdered squill, 1 dram; honey to form a ball. One every morning.

2247. Cough Ball.

Powdered marshmallow root and licorice, of each 1 dram; elecampane, sulphur and kermes mineral, of each $\frac{1}{2}$ dram; honey to form a ball. Twice a day.

2248. Cough Ball.

Spermaceti, 1 ounce; balsam of copaiba, 1 ounce; benzoin, 2 drams; sulphur, 2 ounces; elecampane, 2 ounces; powdered squills, 4 drams; emetic tartar, 2 drams; syrup of poppies to form a mass for 8 balls.

2249. Cough Ball.

Aloes, 2 ounces; digitalis (powdered), 1 ounce; common mass, 13 ounces. Dose, 1 ounce twice a day.

2250. Cough Ball.

Emetic tartar, $\frac{1}{2}$ dram; digitalis, $\frac{1}{2}$ dram; nitre, $1\frac{1}{2}$ drams; tar enough to form a ball. Every night.

2251. Cough Ball.

Powdered squill, 1 dram; gum ammoniac, 3 drams; opium, $\frac{1}{2}$ dram; syrup to form a ball.

2252. Cough Ball.

Ipecacuanha, 1 dram; camphor, 2 drams; licorice powder, 1 dram; honey to form a ball. To be given every morning.

2253. Cough Ball.

Sulphur, $\frac{1}{2}$ ounce; asafoetida, 1 ounce; licorice powder, 1 ounce; Venice turpentine, 1 ounce. For 4 balls. One every night for 4 times.

2254. Cough Ball.

Pulverized ipecac, $\frac{3}{4}$ ounce; camphor, 2 ounces; squills, $\frac{1}{2}$ ounce. Mix with honey to form into mass, and divide into 8 balls. Give 1 every morning.

2255. Cough Ball.

Castile soap..... 5 ounces.
Aniseed 5 ounces.
Licorice 5 ounces.
Barbadoes tar..... 6 ounces.
Ammoniacum 3 ounces.
Balsam of tolu..... 1 ounce.
Honey q. s. to make a mass for 12 balls.

One every morning for a fortnight.

2256. Cough Ball.

Digitalis $\frac{1}{2}$ dram.
Camphor 1 dram.
Emetic tartar..... 1 dram.
Nitre 3 drams.
Linseed meal..... 1 dram.

Make up with Barbadoes tar, and give 1 daily.

2257. Cough Ball.

Licorice powder $\frac{1}{2}$ ounce.
Linseed or barley meal.... 1 ounce.
Tar 1 dram.

Honey to form a ball.

2258. Diuretic Balls.

Digitalis 1 ounce.
Aloes 1 ounce.
Licorice root..... 13 ounces.

Honey or Barbadoes tar, enough to make into balls.

Divide the above into 16 doses and give one twice a day. With care.

2259. Diuretic Balls.

Resin, soap, niter, of equal parts, beaten together into a mass; dose, 1 ounce to $1\frac{1}{2}$ ounces.

2260. Diuretic Balls.

Common turpentine..... 4 ounces.
Ginger 1 ounce.
Flour, quantity sufficient.
Castile soap..... 4 ounces.
Caraway 8 ounces.

Dose 1 ounce to $1\frac{1}{2}$ ounce.

2261. Diuretic Balls.

Resin 16 ounces.
White soap..... 16 ounces.
Niter 8 ounces.
Dried common soda..... 2 ounces.
Oil of juniper..... 4 ounces.

Beat together, adding flour, if required.

Dose 1 ounce to $1\frac{1}{2}$ ounces.

2262. Diuretic Balls.

Niter 1 pound.
Castile soap..... $\frac{1}{2}$ pound.
Common turpentine..... 1 pound.
Barley meal..... $2\frac{1}{2}$ lbs. or q. s.

Dose about 1 ounce.

2263. Diuretic Balls.

White soap..... 8 ounces.
Niter 3 ounces.
Resin..... 3 ounces.
Camphor 3 drams.
Oil of juniper..... 3 drams.

For 6 balls; 1 every other morning.

2264. Diuretic Balls.

Yellow resin, 2 ounces; common turpentine, 4 ounces; soap, 3 ounces; melt together, stir in 1 ounce sweet oil, add oil of aniseed, $\frac{1}{2}$ ounce; oil of juniper, $\frac{1}{2}$ ounce; ginger, 2 drams; linseed meal, quantity sufficient; mix, divide into 8 balls; 1 a day till the water is affected.

2265. Diuretic Balls.

Castile soap scraped fine, and powdered resin, each 3 teaspoonfuls; powdered niter, 4 teaspoonfuls; oil of juniper, 1 small teaspoonful; honey, a sufficient quantity to make into a ball.

2266. Diuretic Balls.

Potassium nitrate..... 50.0
Potassium carbonate..... 15.0
Pulverized resin..... 100.0
Castile soap..... 100.0
Oil juniper wood..... 5.0
Licorice root..... 30.0
Water, quantity sufficient.

Mix and make into 6 balls. Dose: 1 bolus 3 times a day.

2267. Diuretic Alterative Balls.

Dried common soda 1 ounce; castile soap 6 drams, resin 2 ounces, licorice powder $\frac{1}{2}$ ounce, Barbadoes tar to form 6 balls; 1 daily.

2268. Diuretic Alterative Balls.

Acetate of potash $\frac{1}{2}$ ounce, fenugreek 1 ounce, treacle enough to form a mass for 2 balls; 1 daily.

2269. Tonic Diuretic Balls.

Gentian 1 dram, ginger $\frac{1}{2}$ dram, sulphate of iron 2 drams, diuretic mass $\frac{1}{2}$ ounces, oil of juniper 10 drops, syrup of squill $\frac{1}{2}$ ounce; twice a day in dropsy of chest; less frequently in swelled legs.

Diuretic mass, directed in this formula, consists of resin $2\frac{1}{2}$ pounds, cream of tartar $\frac{1}{2}$ pound, sulphur $\frac{1}{2}$ pound, linseed meal 1 pound, palm oil 1 pound.

2270. Resin Diuretic Electuary.

Potassium nitrate..... 10 grams.
 Resin 10 grams.
 Althaea root..... 5 grams.
 Oil turpentine..... 1 gram.
 Green soap..... 15 grams.
 For 1 pill.

2271. Fever Balls.

Powdered camphor..... $\frac{1}{2}$ dram.
 Potassium nitrate..... 2 drams.
 Tartar emetic..... $\frac{1}{2}$ dram.
 Ground linseed..... 1 ounce.
 Honey, enough to make a ball.
 Not to be given oftener than twice a day,
 or continued for more than 3 or 4 days.
 For the tartar emetic may be substituted
 calomel 15 grains, opium 15 grains.

2272. Fever Balls.

Emetic tartar, $\frac{1}{2}$ dram; camphor, $\frac{1}{2}$ dram;
 nitre, 2 drams; common mass, 6 drams, or
 q. s. for 1 ball. To be given once or twice
 a day.

2273. Fever Balls.

Camphor, 1 dram; nitre, 6 drams; anti-
 monial powder, 2 drams; flour and soap
 to form a ball.

2274. Fever Balls.

Antimonial powder, 2 drams; nitre, 3
 drams; cream of tartar, 2 drams; honey
 to form a ball. In influenza, twice a day.

2275. Fever Balls.

Emetic tartar and camphor, each $\frac{1}{2}$
 ounce, and nitre, 2 ounces. Mix with lin-
 seed meal and molasses to make 8 balls,
 and give 1 twice a day.

2276. Laxative Balls.

Aloes 3 to 4 drams.
 Soap 3 drams.
 Oil of caraway..... 20 drops.
 Syrup. q. s.

2277. Laxative Balls.

Aloes 3 to 4 drams.
 Soap 4 drams.
 Emetic tartar..... 1 dram.
 Mucilage to form a ball.

2278. Balls for Inflammation of the Lungs, Bronchitis, etc.

Antimonial powder 2 drams.
 Digitalis 1 dram.
 Nitre 3 drams.
 Cream of tartar 3 drams.
 Honey to form a ball. One every 4, 6, or
 8 hours, in inflammation of the lungs.

2279. Balls for Inflammation of the Lungs, Bronchitis, etc.

Digitalis 1 dram.
 Emetic tartar $1\frac{1}{2}$ drams.
 Nitre 3 drams.
 Honey, q. s.
 When the pulse intermits, reduce the
 dose to half.

2280. Balls for Pneumonia.

White hellebore $\frac{1}{2}$ dram.
 (Or extract of belladonna
 1 dram, or digitalis 1
 dram, or calomel 1
 dram, with opium $\frac{1}{2}$
 dram.)
 Emetic tartar 1 dram.
 Nitre 2 drams.
 Linseed meal 2 drams.
 One twice a day.

2281. Physic Balls.

Powdered gamboge $\frac{1}{2}$ ounce.
 Powdered aloes, soc..... 1 ounce.
 Powdered licorice root ... $\frac{1}{2}$ ounce.
 Powdered senna leaves ... $\frac{1}{2}$ ounce.
 Ginger $\frac{1}{2}$ ounce.
 Powdered castile soap.
 Syrup of each enough to mass.
 Divide into 10 balls. Give 1 and repeat
 in 4 or 6 hours if needed.

2282. Physic Balls.

Aloes 5 ounces.
 Hard soap 5 ounces.
 Salts of tartar 1 ounce.
 Cayenne pepper..... 1 ounce.
 Melt together and form into 8 balls.

2283. Physic or Purgine Balls.

Bruised Barbadoes aloes 8 ounces; olive
 oil 1 ounce; melt together in a vessel
 placed in hot water; remove it from the
 fire, add 3 ounces of treacle, and stir
 together; dose 6 to 12 drams, equal to 4
 to 8 drams of aloes.

2284. Physic or Purgine Balls.

Barbadoes aloes in small pieces 8 parts,
 glycerine 2 parts, ginger in powder 1 part.
 Melt together in a water bath, and thor-
 oughly incorporate by constant stirring.
 If desirable, gentian may be substituted for
 ginger. Dose, from 6 to 8 drams.

2285. Physic or Purgine Balls.

Barbadoes aloes 4 to 8 drams, soap 3 to
 4 drams, ginger 1 dram, oil of cloves 10
 drops (or oil of caraway or aniseed 20
 drops), water 1 dram or quantity suffi-
 cient; beat together into a mass.

2286. Physic or Purgling Balls.

Barbadoes aloes 15 ounces, ginger 1 ounce, mix and beat up with 8 ounces of palm oil. Dose, 1 to 1½ ounces.

2287. Physic or Purgling Balls.

Barbadoes aloes 24 drams, Cape aloes 12 drams, olive oil 4 drams, treacle 12 drams. Dose, 7 to 14 drams.

2288. Physic or Purgling Balls.

Barbadoes aloes 5 to 8 drams, cream of tartar 2 drams, oil of cloves 10 drops, treacle to form a ball.

2289. Physic or Purgling Balls.

Barbadoes aloes 7½ parts; socotrine aloes 7½ parts, ginger 1 part; mix the powders, add 7½ parts of the palm oil, and beat to a mass; keep it in a jar closely covered; dose, 1¼ to 1¾ ounces.

2290. Physic or Purgling Balls.

Barbadoes aloes 7½ parts, socotrine aloes 7½ parts, ginger 1 part; mix the powders, add 7½ parts palm oil, and beat into a mass; keep in a jar closely covered; dose, 1¼ to 1¾ ounces.

2291. Purgative Balls.

Aloes 1 ounce, cream tartar and castile soap each ¼ ounce. Mix with molasses to make a ball.

2292. Stimulant and Cordial Eleetuary.

Powdered angelica root 2 ounces, masterwort 1 ounce, muriate of ammonia ½ ounce, honey 8 ounces.

2293. Stimulant and Expectorant.

Asafoetida 4 ounces, elecampane 8 ounces, honey 32 ounces, for 6 doses.

2294. Stimulant and Expectorant.

Powdered cassia and ginger, each 1 ounce; honey, 6 ounces. Dose, one ounce to 1½ ounces.

2295. Tonic Balls.

Sulphate of quinine 1 dram, gentian, oak bark and honey, to form a ball.

2296. Tonic Balls.

Gentian 1 dram, ginger ½ dram, cascarilla ½ dram, treacle and linseed meal to form a ball.

2297. Tonic Balls.

Myrrh 2 drams, mustard flour 1 dram, cantharides 5 grains, chamomile 4 drams, Venice turpentine, quantity sufficient for one ball.

2298. Tonic Balls.

Quassia 2 drams, canella 2 drams, opium ½ dram, ginger 1 dram, treacle, quantity sufficient.

2299. Alterative Tonics.

Niter, 1 ounce; sulphur, 6 drams; physic mass, ½ ounce; gentian, 6 drams; ginger, ½ ounce; palm oil, quantity sufficient for four balls. One daily after an attack of stomach staggers.

2300. Mineral Tonics.

Gentian, 4 drams; chamomile, 2 drams; carbonate of iron 1 dram; ginger, 1 dram; syrup for one ball.

2301. Mineral Tonics.

Sulphate of iron, 2 drams; carbonate of potash, 2 drams; cascarilla, 2 drams; caraway, 4 drams; treacle, quantity sufficient.

2302. Mineral Tonics.

Sulphate of iron, 1 dram; carbonate of soda, 2 drams; myrrh, 1 dram; ginger, 1 dram; cantharides, 6 grains; caraway, ½ ounce; treacle, quantity sufficient.

2303. Jaundice (Yellows) Without Fever.

Calomel, 1 dram; aloes, 2 drams; soap, 2 drams; for one ball; night and mornings till purged, then so as to keep the bowels lax.

2304. Jaundice.

In the later stage, when not costive, calomel, 12 grains; sulphate of copper, 1 dram; gentian, 3 drams; oak bark, 3 drams; chamomile, 3 drams; syrup to form a ball; once or twice a day.

CONDITION POWDERS.

2305. Alterative Powder.

Aethiops mineral, 2 to 5 grains; cream of tartar, 4 to 10 grains; tartarized iron, 1 to 3 grains, once a day.

2306. Alterative Powder.

Saltpetre 16 ounces.
 Resin 16 ounces.
 Prepared antimony..... 4 ounces.
 Flowers of sulphur..... 44 ounces.
 Mix. Dose, one ounce every evening, with moistened corn, for 6 or 8 times.

2307. Alterative Powder.

Sulphur 4 ounces.
 Levigated antimony..... 2 ounces.
 Nitre 3 ounces.

2308. Alterative Powder, or Blood Purifier.

Cream of tartar..... 5 pounds.
 Sulphur 5 pounds.
 White resin..... 5 pounds.
 Gum guaiacum 3 pounds.
 Nitrate of potassium..... 2 pounds.
 Gentian root 5 pounds.
 Golden sulphuret of anti-
 mony 6 ounces.

2309. Alterative, Diuretic and Diaphoretic Powder.

Sulphur 12 ounces, black antimony 12 ounces; mix and divide into 24 powders, for mange, etc.

2310. Alterative Powder.

Levigated antimony 8 ounces, sulphur 8 ounces, Ethiop's mineral 4 ounces, cream of tartar 4 ounces, in 12 doses.

2311. Aromatic Powder, or Horse Spice, White's.

Caraway 6 ounces.
 Pimento 4 ounces.
 Ginger 2 ounces.
 Licorice..... 2 ounces.
 Mix. Dose, 6 to 8 drams.

2312. Powders for Chronic Bronchitis.

Powdered nux vomica.... 3 ounces.
 Powdered arsenic..... 70 grains.
 Powdered sulphate of cop-
 per..... 3 ounces.

Mix and divide into 35 powders. Give one powder night and morning in feed.

2313. Cleansing Powder.

Gentian, powdered 4 ounces.
 Blood root, powdered.... 4 ounces.
 Golden seal, powdered.... 4 ounces.
 Saltpetre, powdered..... 1 ounce.
 Antimony, powdered..... ½ ounce.

Give a large spoonful every day in wet feed.

2314. Condition Powder.

Foenugreek,
 Cream tartar,
 Sulphur,
 Saltpetre,
 Resin, of each, equal parts.

2315. Condition Powder.

Cream of tartar..... 5 pounds.
 Sulphur 5 pounds.
 White resin 5 pounds.
 Gum guaiacum..... 3 pounds.
 Nitrate of potassium..... 2 pounds.
 Gentian wood 5 pounds.
 Golden sulphuret of anti-
 mony 6 ounces.

Reduce the ingredients to a fine powder and mix intimately.

2316. Condition Powder.

Licorice 1 pound.
 Elecampane 1 pound.
 Fenugreek 1½ pounds.
 Gentian ½ pound.
 Anise seed..... ¼ pound.
 Ginger ¼ pound.
 Black antimony ¾ pound.
 Saltpetre ½ pound.
 Sulphur ½ pound.
 Epsom salts..... 1 pound.
 Resin ¼ pound.
 Copperas ¼ pound.

2317. Condition Powder.

Powdered asafoetida..... ½ ounce.
 Powdered Jamaica ginger,
 Powdered skunk cabbage,
 Powdered wild turnip,
 Powdered licorice root,
 Powdered lobelia,
 Powdered black antimony,
 Powdered resin,
 Powdered saltpetre,
 Powdered tartar emetic,
 Powdered gentian root,
 Powdered sulphate iron, dried,
 Powdered cream tartar,
 Powdered sulphur,
 Powdered blood root, each 1 ounce.
 Flaxseed meal,
 Brown sugar, each, quan-
 tity sufficient, to..... 2 pounds.

Mix and triturate very fine.

Tablespoonful dose 3 times a day for the first week, and then only twice a day in wet chop feed.

2318. Condition Powder.

Flowers of sulphur..... 8 ounces.
 Powdered licorice..... 8 ounces.
 Powdered fenugreek..... 6 ounces.
 Nitrate of potash..... 4 ounces.
 Powdered ginger 3 ounces.

2319. Condition Powder.

Nitre 4 ounces.
 Sulphur 4 ounces.
 Powdered gentian 1 ounce.
 Powdered fenugreek 1 ounce.
 Powdered licorice 4 ounces.

2320. Condition Powder.

Black antimony 4 ounces, flowers of sulphur 2 ounces, bean flour or baricy meal ½ pound; a tablespoonful with corn.

2321. Condition Powder.

Sulphur 2 pounds, fenugreek 4 pounds, cream of tartar 1 pound, licorice 1 pound, nitre 1 pound, black antimony ½ pound, gentian ¼ pound, aniseed ¼ pound, common salt 1 pound; dose, 1 ounce daily for 2 or 3 weeks.

2322. Condition Powder.

Gentian 4 ounces, licorice 4 ounces, fenugreek 16 ounces, diapente 6 ounces, nitre 4 ounces, salt 4 ounces; to promote appetite.

2323. Condition Powder.

Aromatic powder 2 ounces, asafoetida $\frac{1}{4}$ ounce, cream of tartar $\frac{3}{4}$ ounce, crocus metallorum $\frac{1}{2}$ ounce; for 2 doses.

2324. Condition Powder for Distemper.

Powdered licorice..... 8 ounces.
Powdered fenugreek..... 8 ounces.
Powdered elecampane..... 8 ounces.
Powdered bloodroot..... 4 ounces.
Powdered tartar emetic.... 1 ounce.
Powdered ginger..... 2 ounces.
Powdered cayenne..... 2 ounces.

2325. Antimony Condition Powder.
Era.

Black sulphide antimony.. 6 ounces.
Copperas 4 ounces.
Sulphur 4 ounces.
Saltpetre 4 ounces.
Powdered resin..... 4 ounces.
Powdered fenugreek..... 4 ounces.

Mix in mortar and pass through sieve. One tablespoonful in feed, once a day 3 times a week.

2326. Antimony Condition Powder.

Sulphur 2 pounds.
Fenugreek 4 pounds.
Cream of tartar..... 1 pound.
Powdered licorice..... 1 pound.
Saltpetre 1 pound.
Black antimony..... $\frac{1}{2}$ pound.
Powdered gentian..... $\frac{1}{4}$ pound.
Powdered anise..... $\frac{1}{4}$ pound.
Common salt..... 1 pound.

Dose: One ounce daily for 2 or 3 weeks.

2327. Farmer's Condition Powder.
Era Prize.

Powdered gentian..... 2 ounces.
Powdered saltpetre..... $\frac{1}{2}$ ounce.
Powdered sulphur..... 2 ounces.
Powdered resin..... 1 ounce.
Powdered fenugreek 1 ounce.
Powdered ginger..... 2 ounces.
Powdered cayenne pepper 1 ounce.
Powdered black antimony 2 ounces.
Powdered flaxseed..... 5 ounces.
Powdered elm bark..... 5 ounces.
Powdered blood root..... 1 ounce.
Powdered copperas..... 5 ounces.
Powdered sodium sulphate $4\frac{1}{2}$ ounces.

Triturate the ingredients to a fine powder and mix.

Dessertspoonful 2 times a day in the feed.

2328. Equinocure Condition Powder.
Era.

Soda bicarbonate..... 12 ounces.
Carbonate iron (red oxide) 6 ounces.
Powdered fenugreek..... 6 ounces.
Powdered aniseed..... 6 ounces.
Powdered gentian..... 6 ounces.
Powdered caraway..... 6 ounces.
Powdered potass nitrate.. 12 ounces.

2329. German Cavalry Condition Powder.

Common salt..... 1 part.
Glauber salt..... 2 parts.
Sodium bicarbonate..... 2 parts.
Juniper berries..... 2 parts.
Gentian 2 parts.
Ginger 2 parts.
Linseed 5 parts.
Fenugreek 10 parts.
Asafoetida 80 parts.
Fennel seed, sufficient to
make 150 parts.

Powder separately and mix thoroughly. The dose for a horse or cow is a heaped-up teaspoonful administered with the animal's food.

2330. Hinds' Condition Powder.

Sulphur 8 parts.
Tartar emetic..... 4 parts.
Common salt..... 64 parts.
Liver of antimony..... 8 parts.

Powder and mix. Dose, from 1 to 2 ounces.

2331. Condition Powder (Kornberger's Veterinary Powder).

Epsom salts..... 80.
Flowers sulphur..... 10.
Calamus..... 5.
Gentian..... 5.
All finely powdered.

2332. Maud S. Condition Powder.

Exsiccated sulphate of
Iron 5 pounds.
Cantharides 1 pound.
Ginger 3 pounds.
Black sulphuret of antimony..... 6 pounds.
Nitrate of potassium..... 5 pounds.
Sulphur 10 pounds.
Flaxseed..... 10 pounds.
Gentian (best)..... 7 pounds.
Cream of tartar..... 3 pounds.
White resin..... 5 pounds.
Anise seed..... 5 pounds.

Thoroughly powder, mix. The dose is a tablespoonful once or twice a day, mixed in feed. Another method is to mix the dose into a mass with molasses, honey or glycerine, or put the dose into a large capsule.

2333. Molraud's Condition Powder.

Fern root..... 4 parts.
 Tansy..... 2 parts.
 Asafoetida 1 part.
 Aloes 1 part.

Powder and mix. Dose, from 12 drams to 2 ounces.

2334. O. K. Condition Powder.

Era.

Powdered cape aloes..... 1 ounce.
 Powdered gum asafoetida... 1 ounce.
 Powdered cream tartar..... 2 ounces.
 Powdered gentian root..... 2 ounces.
 Powdered Jamaica ginger... 2 ounces.
 Powdered licorice root..... 2 ounces.
 Powdered sulphur..... 2 ounces.
 Powdered saltpetre..... 2 ounces.
 Powdered fenugreek seed... 2 ounces.

Mix thoroughly in a powder mill or iron mortar. One tablespoonful twice a day in chop feed.

2335. Prairie Condition Powder.

Black sulphuret of anti-
 mony (in very fine pow-
 der and pure)..... 10 pounds.
 Flowers of sulphur (very
 fine)..... 9 pounds.
 Powdered elm bark..... 4 pounds.
 Powdered resin..... 2 pounds.
 Powdered nitrate potas-
 sium 2 pounds.
 Powdered anise seed..... 1 pound.

Thoroughly mix. Dose is a heaping table-
 spoonful once or twice a day.

2336. Red Horse Condition Powder.

Fenugreek 3 parts.
 Gentian..... 2 parts.
 Antimony 2 parts.
 Capsicum..... 2 parts.
 Cream tartar..... 2 parts.
 Resin 2 parts.
 Niter..... 2 parts.
 Ginger..... 3 parts.
 Gum myrrh..... 1 part.

Powder and mix.

2337. Tattersall Condition Powder.

Tartar emetic 3 parts.
 Black sulphide of antimony. 3 parts.
 Angellca root 24 parts.
 Fennel seed 24 parts.
 Juniper berries 40 parts.
 Sugar 6 parts.

Powder and mix.

2338. Ten Broeck Condition Powder.

Resin 2 parts.
 Juniper berries 2 parts.
 Flower of sulphur 1 part.
 Nitre 1 part.
 Fenugreek 2 parts.
 Asafoetida 1 part.

Powder and mix.

2339. Tobias' Condition Powder.

Tartar emetic 2 parts.
 Ginger 2 parts.
 Black antimony 20 parts.
 Asafoetida 1 part.
 Sulphur 10 parts.
 Saltpetre 10 parts.
 Fenugreek 35 parts.
 Juniper berries 25 parts.

Powder each article separately, and mix
 thoroughly. The dose is from 90 grains to
 2 drams.

2340. Arabian Condition Powders.

Ground ginger, 1 pound; sulphuret of an-
 timony, 1 pound; powdered sulphur, 1
 pound; saltpetre, 1 pound. Mix all to-
 gether and administer in a mash in such
 quantities as may be required.

2341. Cough Powder.

Powdered blood root 2 ounces.
 Powdered licorice root 4 ounces.
 Powdered ginger 2 ounces.
 Powdered lobelia 1 ounce.
 Powdered tartar emetic ... ½ ounce.
 Powdered fenugreek 2 ounces.
 Powdered ipecac ¼ ounce.
 Powdered opium 2 drams.

Mix and thoroughly triturate. Table-
 spoonful three times a day with wet bran.
 Keep the horse well covered with a blanket,
 also change bedding every day.

2342. Cough Powder.

Black antimony 1 ounce.
 Capsicum 1 ounce.
 Gentian 2 ounces.
 Fenugreek 2 ounces.
 Sulphur 2 ounces.
 Saltpetre 2 ounces.
 Cream of tartar 2 ounces.
 Ginger 2 ounces.
 Licorice 3 ounces.

Dose, one tablespoonful once or twice a
 day.

2343. Cough Powder.

Black antimony 4 ounces.
 Sulphur 2 ounces.
 Bean flour or barley meal.. ½ pound.

A tablespoonful with corn.

2344. Cough Powder.

Licorice root 1½ ounces.
 Marshmallow 1½ ounces.
 Anise 1½ ounces.
 Elecampane 4 ounces.
 Cayenne ¼ ounce.

2345. Cough Powder.

Elecampane 1½ ounces.
 Marshmallow 1½ ounces.
 Boneset 1½ ounces.
 Licorice 1 ounce.
 Aniseed 1 ounce.
 Cayenne ¼ ounce.

2346. Cough Powder.

Polypody root	2 ounces.
Skunk cabbage	1 ounce.
Pleurisy root	1 ounce.
Black cohosh	1 ounce.
Elecampane	1 ounce.
Beth root	1 ounce.
Llicorice root	1 ounce.
Ginger	1 ounce.
Black pepper	1 ounce.
Lobelia	¼ ounce.
Cloves	¼ ounce.

To be powdered and well mixed.

These powders give speedy relief in asthma, hoarseness, shortness of breath, pleurisy, and other bronchial and lung affections. An infusion is made from an ounce of the powder, with a pint of boiling water, and should be sweetened with honey or molasses. Dose of the infusion, a large wineglass when the cough is troublesome.

2347. Cough Powder.

Powdered anise	1 part.
Powdered squill	2 parts.
Powdered licorice	3 parts.
Chloride of ammonium.....	1 part.
Black antimony	1 part.

Mix.

The dose is about one ounce.

2348. Cough Powder.

Ammonium chloride	1 dram.
Black antimony	1 dram.
Powdered anise	1 dram.
Powdered squill	2 drams.
Powdered licorice	3 drams.

For a single dose. To be administered night and morning.

2349. Diuretic for Horses and Cattle.

Powdered resin	1 pound.
Tartrate of potash.....	½ pound.
Juniper berries	½ pound.
Castile soap	½ pound.

Cut the soap in thin slices and pulverize all the others, then beat the whole in a mortar to a proper consistence, and give one large spoonful of the powder in bran mash, or wet oats if the animal will not eat the bran, twice daily. In strangury and in suppression of urine, this powder will be found very valuable.

2350. Tonic Powders for Horses.

Gentian,
Ginger,
Caraway,
Linseed meal,
Salt,
Nitre,

Of each, equal parts.

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2351. Iron Tonic Powders.

Sulphate of iron,
Powdered gentian,
Powdered caraway seed,
Of each, equal parts.

Corlander seeds or ginger may be substituted for the caraway. Sulphate of copper is sometimes used in place of iron, and it seems of special value in cases of chronic nasal discharge. The ordinary dose of either sulphate of iron or copper for a horse or ox is two drams, but in the above case can be doubled. As much as five drams of sulphate of iron have been given daily for three weeks.

DRENCHES.**2352. Drench.**

Linseed tea, 1 pint; honey, 2 ounces; syrup of poppies, 2 ounces; linseed oil, 4 ounces.

2353. Cough Drench.

Linseed oil, 2 ounces; solution of potash, 10 drops; treacle, 1 ounce; soft water, 10 ounces. Mix.

2354. Drench for Diarrhoea.

Laudanum, 1 ounce; ether, 1 ounce; tannin, 1 scruple; given in gruel or ale. This is to be given when the purging has gone on for some days, or when laxatives have been given without the desired effect.

2355. Drench.

Prepared chalk, 1 ounce; catechu, 2 drams; opium, 1 dram; ginger, 1 dram; rub together with the contents of 1 egg, and add ½ pint of this gruel.

2356. Drench.

For purging from corrosive sublimate: Powdered opium, 2 drams; rub down with the yolk and white of 1 egg, and the contents of 2 more eggs, and gradually stir in ½ pint of thin gruel.

2357. Drench for Diabetes.

Sulphuret of potash, 2 drams; uva ursi, 4 drams; oak bark, 1 ounce; catechu, 2 drams; opium, ½ dram. In strong chamomile tea.

2358. Drench.

Calomel, 3 drams; cascarrilla, 2 drams; salt of steel, 2½ drams; salt of tartar, 1½ drams; tincture of opium, ½ ounce; strong beer, q. s.

2359. Anodyne Carminative Tincture.

Opium, 1 ounce; cloves, 1 ounce; ginger, 1 ounce; old brandy (rum or gin), 1 quart; digest in a corked bottle, shaking daily. Dose, a fourth or sixth part.

2360. Carminative and Antispasmodic Drench.

Camphor, 2 drams; tincture of opium, 1 ounce; oil of peppermint, 30 drops; warm water, 1 pint. In a violent attack, add 1 ounce of spirit of turpentine.

2361. Carminative and Antispasmodic Drench.

Laudanum, 1 ounce; sweet spirit of nitre, 4 ounces; oil of juniper, 1 ounce; tincture of benzoin, 2 ounces; spirit of sal volatile, 1½ ounces; oil of peppermint, 1 dram; mix; give a fourth part in warm water or gruel, and repeat in two or three hours if necessary.

2362. Gripe Medicine.

Chloral hydrate 1 dram.
Extract cannabis indica.... 2 drams.
Oil turpentine 2 ounces.
Aromatic spirit ammonia... 1 ounce.
Solution aloes (1-4)..... 2 ounces.
Linseed oil enough to make 6 ounces.

A drench to be given in ½ to 1½ pints of linseed oil.

2363. Colic Cure.

Bleed freely at the horse's mouth; then take ½ pound raw cotton, wrap it around a coal of fire so as to exclude the air; when it begins to smoke, hold it under his nose till he becomes easy.

2364. Colic Cure.

Spirits turpentine, 1 ounce; laudanum, 1 ounce; mix; and for a horse, give all for a dose, by putting it into a bottle with half a pint of warm water. If relief is not obtained in an hour, repeat the dose, adding half an ounce of the best powdered aloes, well dissolved.

2365. Hnnley's Colic Cure.

Laudanum 1 ounce.
Essence of peppermint..... 1 ounce.
Spirit of nitre..... 1 ounce.
Ether 1 ounce.
Bicarbonate of sodium.....½ ounce.
Whisky 4 ounces.
Linseed oil..... 4 ounces.

2366. Colic Essence.

Tincture opium..... 5.0
Tincture nux vomica..... 2.5
Tincture arnica..... 2.5
Tincture valerian, ethereal..... 2.5
Water200.0

2367. Flatulent Colic.

Tincture of opium..... 1 ounce.
Tincture of myrrh..... 1 ounce.
Sulphuric ether 6 drams.
Tepid water 1 pint.

Repeat in one hour if relief is not obtained.

2368. Spasmodic or Flatulent Colic.

Sweet spirits of nitre..... 2 ounces.
Tincture of opium..... 1 ounce.
Decoction of aloes..... 4 ounces.

2369. Tincture for Colic.

Opium, 1 dram; horse radish, 2 ounces; capsicum, 1 ounce; spirit of nitrous ether, 1 pound; macerate for 14 days; dose, 1 ounce, with two ounces of spirit of nitrous ether, every two hours as long as necessary.

2370. Cough Draught.

Oil of anise..... 5 drops.
Camphor 20 grains.
Extract of licorice..... 1 dram.
Tincture of opium..... 3 drams.
Spirit ½ ounce.
Water to 3 ounces.

Dissolve the oil and camphor in the spirit and add to the other ingredients, previously well mixed.

2371. Drench for Fever.

Saltpetre 2 drams.
Tartar emetic ½ dram.
Warm water or thin gruel 12 ounces.
Give once or twice a day.

2372. Drench for Fever.

Sweet spirits of nitre..... 1 ounce.
Spirits of mindereus..... 6 ounces.
Water 4 ounces.

2373. Inflammation of the Lungs.

Tincture opium ½ ounce.
Tincture aconite root..... ¼ ounce.
Tincture belladonna ¼ ounce.
Sweet spirits of nitre..... 1 ounce.
Warm water,, enough to
make 1 pint.

One ounce every two or three hours.

2374. Stronger Purgative Drench.

In inflammation of the brain.
Barbadoes aloes 2 ounces.
Gum arabic 1 ounce.
Powder and mix them, and pour on them a pint of boiling water. Take 10 grains of farine of croton, and add to it gradually 4 ounces of the above solution. Repeat this dose every 6 hours till it operates.

2375. Purgative Drench.

Aloes 1 ounce.
Soap 2 drams.
Salt of tartar..... 1 dram.
Water 1 pint.

In apoplexy or staggers.

2376. Purgative Drench.

Aloes 1 ounce.
Syrup of buckthorn..... 4 ounces.
Warm water 1 quart.

HEAVES.

2377. Remedy for Heaves.

Balsam of fir..... 4 ounces.

Balsam of copaiba..... 4 ounces.

And mixed with calcined magnesia sufficiently thick to make it into balls; give a middling-sized ball night and morning for a week or ten days.

2378. Heave Powder.

Rosin weed 100 parts.

Lobelia..... 100 parts.

Elecampane root..... 100 parts.

Sodium sulphate..... 100 parts.

Gentian root..... 30 parts.

Blood root..... 30 parts.

Tartar emetic..... 10 parts.

Conium maculatum..... 30 parts.

Alum 50 parts.

Fenugreek 50 parts.

Linseed 150 parts.

2379. Cure for Heaves.

Tincture myrrh 1½ ounces.

Tincture cantharides..... 2 ounces.

Turpentine 2 ounces.

Tincture iodine..... 1½ ounces.

Tincture capsicum..... ½ ounce.

Aqua ammonia..... 1¼ ounces.

Chloroform ¼ ounce.

Alcohol 2 ounces.

Bathe throat with hot water; then apply medicine. This should be used once in three days, until five applications have been made.

2380. Liquid Cough and Heave Cure.

Oil of tar..... 2½ ounces.

Fluid extract of elecampane..... ½ ounce.

Fluid extract of lobelia... ¼ ounce.

Fluid extract of squills... ½ ounce.

Black molasses..... 2¼ ounces.

2381. Heave Powder.

Antimony, powdered..... 1 ounce.

Fenugreek, powdered..... 1 ounce.

Ginger root, powdered..... 2 ounces.

Copperas, powdered..... 1 ounce.

Alum, powdered..... 1 ounce.

Camphor gum, powdered... 1 ounce.

Sulphur, powdered..... 1 ounce.

Gunpowder, powdered..... 2 ounces.

Niter, powdered..... 1 ounce.

Mix well.

2382. Remedy for Heaves.

Calcined magnesia, balsam of fir, balsam of copaiba, of each 1 ounce; spirits turpentine, 2 ounces; put all into 1 pint best cider vinegar; give for a dose 1 tablespoonful in feed, once a day for a week, then

every other day for two or three months. Wet the hay with brine, also the other feed. The horse will cough more at first, but looser and looser till cured.

2383. Heave Powder.

Elecampane..... 8 ounces.

Skunk cabbage..... 8 ounces.

Wild turnip..... 8 ounces.

Lobelia herb..... 8 ounces.

Licorice 8 ounces.

WORMS IN HORSES.

2384. Worm Ball for Horses.

Calomel 1 dram.

Venice turpentine ½ ounce.

Oil of savin 2 drams.

Indian pink root,

Wormseed, in powder,

of each 2 drams.

Mix, and make into one ball, with molasses, and give at night, after having fed through the day with bran mashes and no hay. Directly follow the ball with linseed oil, 1 pint in hot gruel, which will warm the oil.

2385. Worm Balls.

Emetic tartar 1 dram, ginger 1 scruple, linseed meal and treacle to form a ball; 1 every morning an hour before feeding.

2386. Worm Balls.

Calomel 8 grains, arsenic 8 grains, tin filings 1 ounce, Venice turpentine ½ ounce; mix, and give every morning, fasting, for a fortnight.

2387. Worm Balls.

Common salt ½ ounce, gentian 2 drams, rust of iron 2 drams, savin 1 dram, treacle to form a ball; to be given every morning for a week; then a purging ball.

2388. Worm Balls.

Barbadoes aloes 6 drams, ginger 1½ drams, oil of wormwood 20 drops, carbonate of soda 2 drams, syrup to form a ball; ½ dram or 1 dram of calomel may be added, or given the previous night; to be repeated at intervals of 10 days if required.

2389. Worm Balls.

Emetic tartar 1 dram, common mass 6 drams; to be given for 6 mornings and a purging ball on the seventh.

2390. Worm Balls.

Asafoetida 2 drams, calomel 1 to 2 drams, savin 1½ drams, oil of wormwood 20 drops, syrup quantity sufficient; at night, and physic ball in the morning.

2391. Worm Balls.

Powdered tartar emetic... 4 drams.
 Powdered jalap 1½ ounces.
 Powdered ginger 2 drams.
 Powdered Barbadoes aloes. 2 ounces.
 Powdered castile soap.... ½ ounce.
 Oil of cloves ½ dram.
 Simple syrup 1 ounce.
 Tragacanth mucilage ½ ounce.

Make a mass and divide into 1 ounce balls. Give a ball after a very light meal at night, repeating in two or three days if necessary. A tonic ball should be given once a week, or else a tablespoonful of tonic and condition powder every other day to horses which are subject to worms.

2392. Mercurial Balls for Worms.

Calomel,
 Castile soap, of each..... 1 dram.
 Wormseed, in powder..... ½ ounce.

Make them into a ball with syrup of buckthorn. This ball should be given at night and followed in the morning by a purgative.

2393. Worm Powders.

Sulphur 2 drams.
 Areca nut 2 drams.
 Tartar emetic ½ dram.
 Santonin ½ dram.
 Powdered croton seeds..... ½ dram.
 Ginger 2 drams.
 Common salt 1 ounce.

Make a powder.

A powder to be given twice a week. If the bowels are regular, omit the croton seeds, and replace with 20 grains of calomel.

2394. Worm Powder.

Santonin 1 dram.
 Calomel ½ dram.
 Powdered wormseed 2 drams.
 Powdered ginger 2 drams.
 Mix and give at one dose in bran mash.

2395. Worm Powder.

Tartar emetic 2 drams.
 Ginger ½ dram.
 Linseed meal 1 ounce.
 Mix and give at one dose.

2396. Worm Powder.

Santonin 1 dram.
 Tartar emetic ½ dram.
 Powdered pink root..... 1 dram.
 Powdered jalap 2 drams.
 One dose.

2397. Lebas' Worm Powder.

Sulphur 12 parts.
 Metallic mercury 4 parts.
 Triturate together until the mercury is

extinguished, then add:

Male fern 4 parts.
 Rhubarb 4 parts.
 Tansy 4 parts.
 Gentian 4 parts.
 Wormwood 1 part.
 Savin 1 part.
 Castor seeds 1 part.
 Aloes 1 part.

Powder and mix. Dose, from 12 drams to 2 ounces.

2398. For Long Round Worms.

Emetic tartar 1 dram, ginger ½ dram, tin filings 6 drams, linseed meal 1 dram, palm oil to form a ball.

2399. For Long Round Worms.

Asafoetida 4 ounces, gentian 2 ounces, strong mercurial ointment 1 ounce, honey to form a mass for 16 balls; 1 or more every morning.

2400. Scours and Pin Worms.

White ash bark burnt into ashes, and make into a rather strong lye; then mix ½ pint of it with 1 pint warm water, and give all two or three times daily. This will certainly kill off the worms, which are the cause, in most instances, of scours and looseness.

LINIMENTS FOR HORSES.

2401. Horse Liniment.

Alcohol, 95 per cent..... 8 ounces.
 Spirit of turpentine..... 8 ounces.
 Oil of sassafras..... 1 ounce.
 Oil of pennyroyal..... 1 ounce.
 Oil of origanum..... 1 ounce.
 British oil..... 1 ounce.
 Tincture of arnica..... 1 ounce.
 Tincture of camphor..... 1 ounce.
 Aqua ammonia..... 1 ounce.
 Mix them, and make a liniment.

2402. Horse Liniment.

Linseed oil..... 4 parts.
 Turpentine 4 parts.
 Barbadoes tar..... 1 part.
 Crude petroleum..... 1 part.

2403. Horse Liniment.

Olive oil..... 2 pints.
 Camphor..... 2 ounces.
 Oil origanum..... 1 ounce.
 Oil sassafras..... 1 ounce.
 Water of ammonia..... 8 ounces.

Dissolve the camphor in the oils and add the ammonia.

2404. Horse Liniment.

Oil turpentine..... ½ dram.
 Oil thyme..... ½ dram.
 Oil amber, crude..... ½ dram.
 Black oil..... 1 dram.
 Kerosene oil..... 3 drams.
 Water 26 drams.
 Soap 35 grains.
 Caustic potash..... 3 grains.

The soap should be placed together with the alkali in a flask and then dissolved in 2 ounces of hot water and shaken vigorously. When the mixture has once assumed a creamy consistency, the oils are gradually added.

2405. Horse Liniment.

Oil origanum..... 1 ounce.
 Oil spike..... 1 ounce.
 Oil linseed..... 1 ounce.
 Oil turpentine..... 1 ounce.
 Oil cedrat..... 1 ounce.
 Ammonia (26 per cent)..... ½ ounce.
 Tincture aconite..... ½ ounce.

Mix the oils and add the ammonia, then the tincture. For external use only, apply to affected parts by brisk rubbing once or twice a day.

2406. Horse Liniment.

Menthol (crystals) 1 dram.
 Oil origanum..... 1 ounce.
 Oil hemlock..... 1 ounce.
 Oil sassafras..... 1 ounce.
 Oil turpentine..... 1 ounce.
 Camphor 1 ounce.
 Tincture capsicum..... ½ ounce.
 Tincture myrrh..... ½ ounce.
 Tincture benzoin compound..... ½ ounce.
 Alcohol,
 Crude petrolcum,
 Each equal parts to..... 1 pint.

Dissolve the oils and camphor in the alcohol, then add the other ingredients. The petroleum should be fresh and free from gas and water.

2407. Torry Horse Liniment.

Oil wormwood,
 Oil fireweed,
 Oil hemlock,
 Alcohol,
 Equal parts.

2408. Horse Liniment.

Tincture arnica..... 16 parts.
 Oil turpentine..... 4 parts.
 Seneca oil..... 4 parts.
 Petroleum..... 5 parts.
 Water of ammonia..... 4 parts.

2409. Horse Liniment.

Crude petroleum..... 1 ounce.
 Oil of turpentine..... 1 ounce.
 Crude fusel oil..... 1 ounce.
 Camphor ½ ounce.
 Lard oil 1 ounce.

2410. Horse Liniment.

Oil sassafras..... 8 fl. ounces.
 Oil wintergreen..... 2 fl. ounces.
 Sulphuric ether..... 8 fl. ounces.
 Tincture aconite root..... 8 fl. ounces.
 Camphor 8 ounces.
 Alcohol q. s. to make..... 1 gallon.

Use as it is, or color red if desired with red saunders or alkanet root. The tincture of aconite should be entirely alcoholic.

2411. Horse Liniment.

Oil sassafras..... 8 fl. ounces.
 Chloroform 16 fl. ounces.
 Camphor 8 ounces.
 Olive oil..... 3½ pints.
 Spirit turpentine sufficient to make..... 1 gallon.

2412. Horse Liniment.

Oil origanum..... 8 fl. ounces.
 Oil cajuput..... 4 fl. ounces.
 Alcohol 3¼ pints.

2413. Horse Liniment.

Soap liniment..... 4 pints.
 Camphor 8 ounces.
 Chloroform 16 fl. ounces.
 Alcohol sufficient to make..... 1 gallon.

2414. Horse Liniment.

Ammonia..... 4 ounces.
 Sweet oil..... 4 ounces.
 Linseed oil..... 4 ounces.
 Spirits turpentine..... 1 ounce.

2415. Ammoniated Liniment.

Lard, 3 ounces; melt, and add of oil of turpentine and olive oil, of each 1 ounce; when cold, further add of camphorated spirit, 4 fluid drams; liquor of ammonia, 1 fluid dram. In sciatica, lumbago, etc.

2416. Iodide of Ammonium Liniment.

Tincture iodine..... 4 fl. ounces.
 Hyposulphite sodium..... 1 fl. ounce.
 Water..... 4 fl. ounces.
 Water of ammonia..... 14 fl. ounces.
 Chloroform..... 16 fl. ounces.
 Tincture aconite root... 12 fl. ounces.
 Alcohol..... 78 fl. ounces.

Dissolve the hyposulphite of sodium in the water and add the tincture of iodine; then add the aqua ammonia; finally add the chloroform, tincture aconite root and alcohol, previously mixed.

2417. Arnica Liniment.

Tincture of arnica..... 16 parts.
 Camphorated soap liniment. 32 parts.
 Tincture of aconite..... 2 parts.
 Oil turpentine..... 10 parts.
 Tincture capsicum..... 2 parts.

2418. Black Oils.

Oil of turpentine 1 pint.
 Rape oil 3 pints.
 Oil of vitriol $\frac{1}{4}$ pound.

Agitate well together with care, then add of Barbadoes tar 3 ounces; again agitate well, and in 10 days decant the clear portions. Linseed oil is preferred for the above by many persons.

2419. Black Oils.

Alcohol 2 ounces.
 Tincture arnica 2 ounces.
 British oil 2 ounces.
 Oil of tar 2 ounces.
 Add slowly, sulphuric acid, $\frac{1}{2}$ ounce.

2420. Bracing Liniment.

Cider vinegar 4 ounces.
 Ammonia 2 ounces.
 Oil of origanum 1 ounce.
 Spirits of turpentine 1 ounce.
 Dry white lead, in powder.. 1 ounce.

Put them in a bottle and shake them well together every time when used. Apply twice daily, rubbing well each time.

2421. Camphorated Lead Liniment.

Lead acetate 30.0.
 Oil rape (fresh)..... 95.0.
 Camphor 5.0.

For horses' galled shoulders.

2422. Carbolic Liniment.

Solution carbolic acid 2 drams.
 Camphorated oil 2 ounces.
 Oil cedar 1 ounce.
 Oil cottonseed 5 ounces.

2423. Compound Liniment of Chloroform.

Chloroform 2 fl. ounces.
 Tincture aconite root... $\frac{1}{2}$ fl. ounce.
 Ammonia water $\frac{1}{2}$ fl. ounce.
 Olive oil 5 fl. ounces.

2424. Liniment for Contracted Cords and Stiffness of Legs.

Tannic acid 3 drams.
 Spirits nitrous ether 3 ounces.
 Tincture hyoscyamus 3 ounces.
 Tincture iodine 2 ounces.
 Alcohol

Extract witch hazel, of each
 enough to make 1 pint.

Apply on side of cords, from above knee to foot, twice a day for three weeks. Rub well in. Wash leg with a mixture of hot vinegar 1 pint and common salt $\frac{1}{4}$ pint, before using liniment, to remove gum and grease.

2425. Creosote Liniment.

Creosote, 2 ounces; oil of turpentine, 4 ounces; olive oil, 4 ounces. Mix. In fistulous sores, unhealthy wounds, etc.

2426. Detergent Liniment.

Oil of turpentine..... 1 ounce.
 Sulphuric acid..... 2 drams.
 Mix in a large vessel and when cool add
 Linseed oil..... 2 ounces.

2427. Electric Liniment.

Powdered capsicum..... 1 ounce.
 Camphorated oil..... $1\frac{1}{2}$ ounces.
 Oil turpentine..... 16 ounces.
 Let stand for 7 days and filter, beat the filtrate with the contents of 3 eggs—albumen and yolk—until they are thoroughly mixed, and add
 Acetic acid..... $2\frac{1}{2}$ ounces.
 Water 16 ounces.

2428. Embrocation.

Barbadoes tar..... 2 ounces.
 Spirit of turpentine..... 2 ounces.
 Opodeldoc 4 ounces.
 After fomenting with hot vinegar and Goulard's solution.

2429. Embrocation for Stiffness.

Oil of cajuput..... 3 ounces.
 Camphor 2 ounces.
 Oil of turpentine..... 10 ounces.
 Yellow wax in shavings.. 8 ounces.
 Melt the wax in the turpentine by gentle heating in a water bath, making up to 18 ounces with turpentine when finished; then add the camphor and oil of cajuput, previously mixed together to form a solution.

2430. Heyle's Horse Embrocation.

Oil of spike..... 1 ounce.
 Ammonia 1 ounce.
 Oil of camphor..... 2 ounces.
 Oil of origanum..... $\frac{1}{2}$ ounce.
 Tincture of opium..... $\frac{1}{2}$ ounce.
 Spirits of turpentine..... 1 ounce.
 Olive oil 2 ounces.

2431. English Stable Embrocation.

Oil of spike..... 2 ounces.
 Aqua ammonia..... 2 ounces.
 Oil of turpentine..... 2 ounces.
 Sweet oil..... $1\frac{1}{2}$ ounce.
 Oil amber..... $1\frac{1}{2}$ ounce.
 Oil of origanum..... 1 ounce.

2432. Barbed Wire Fence Liniment.

Linseed oil, raw..... 16 fl. ounces.
 Potassium nitrate..... 1 ounce av.
 Lead acetate..... 1 ounce av.
 Sulphuric acid..... 1 ounce av.
 Carbolic acid..... $\frac{1}{2}$ ounce av.
 Mix the oil with the saltpetre and sugar of lead (in fine powder) and slowly add the sulphuric acid, stirring continually. When cold pour off from the dregs and add the carbolic acid. Apply with a feather twice a day. Do not wash the sore at all.

2433. Barbed Wire Fence Liniment.

Carbolic acid, liquefied.. $\frac{1}{2}$ ounce.
 Fluid extract arnica.... 1 fl. ounce.
 Common black oil..... 15 fl. ounces.

Apply twice daily with a feather, washing sores with castile soap and drying well before applying.

2434. "Fence Wire Cut" Liniment.

Copper sulphate 1 av. ounce.
 Ferrous sulphate 1 av. ounce.
 Zinc sulphate $\frac{1}{2}$ av. ounce.
 Alum $\frac{1}{2}$ av. ounce.
 Water 16 av. ounces.

Apply twice a day with a sponge. This is not as much of a liniment as a lotion.

2435. French Liniment.

Oil turpentine 8 ounces.
 Linseed oil 8 ounces.
 Oil juniper 4 ounces.
 Barbadoes tar 3 ounces.
 Oil amber 4 ounces.
 Oil seneca 1 ounce.

Mix, shake and apply.

2436. Liniment Haemostatic and Antiseptic.

Tannic acid..... 10
 Pure carbolic acid..... $7\frac{1}{2}$
 Dilute alcohol,
 Alcohol, of each..... 50

2437. Hemlock Liniment.

Oil of hemlock..... 1 ounce.
 Linseed oil 1 pint.

2438. Hungarian Liniment.

Camphor, pulverized 40 parts.
 Plmento, pulverized 20 parts.
 Flour of mustard..... 40 parts.
 Bruised garlic 20 parts.
 Cantharides, pulverized 10 parts.

These ingredients are digested for 24 hours in:

Vinegar 85 parts.
 Rectified spirits 100 parts.

2439. Horse and Cattle Lotion.

Camphor 1 pound.
 Oil of organum..... 1 pint.
 Water of ammonia..... 1 pint.
 Sweet oil 3 pints.
 Crude petroleum sufficient to make 1 gallon.

Dissolve the camphor in the sweet oil and add the other components.

2440. Indian Liniment.

Tincture of capsicum..... 1 ounce.
 Oil organum $\frac{1}{2}$ ounce.
 Oil sassafras $\frac{1}{2}$ ounce.
 Oil pennyroyal $\frac{1}{2}$ ounce.
 Oil hemlock $\frac{1}{2}$ ounce.
 Alcohol 1 quart.

2441. Startin's Lotion (Non-Mercurial).

Zinc oxide 2 parts.
 Calamine (prepared) 2 parts.
 Precipitated sulphur 1 part.
 Glycerine 3 parts.
 Rose water, sufficient to
 make 16 parts.

Startin's Lotion, mercuriated, contains in addition to the above, 1 grain of mercuric sulphate to every 2 ounces of the mixture.

2442. Magic Liniment.

Oil organum 1 ounce.
 Oil spike 1 ounce.
 Oil linseed 1 ounce.
 Oil turpentine 1 ounce.
 Oil cedar 1 ounce.
 Ammonia 26 per cent..... $\frac{1}{2}$ ounce.
 Tincture aconite $\frac{1}{2}$ ounce.

Mix the oils and then the ammonia water and tincture of aconite.

Shake the bottle and apply over affected parts by briskly rubbing once or twice a day.

2443. Nerve and Bone Liniment.

Oil organum 4 ounces.
 Oil rosemary 4 ounces.
 Oil amber 4 ounces.
 Oil hemlock 4 ounces.
 Spirits turpentine 2 gallons.
 Linseed oil 3 gallons.

Mix and color with anchusa root.

2444. Nerve and Bone Liniment.

Camphor 12 ounces.
 Oil sassafras..... 8 fl. ounces.
 Oil organum..... 8 fl. ounces.
 Water of ammonia..... 12 fl. ounces.
 Chloroform 8 fl. ounces.
 Sweet oil 3 pints.
 Oil of seneca (crude petroleum) 3 pints.

2445. Nerve and Bone Liniment.

Aqua ammonia..... 1 ounce.
 Olive oil, pure..... 2 ounces.
 Camphorated oil..... 1 ounce.
 Oil of rosemary..... $\frac{1}{2}$ ounce.

Mix them, and shake the mixture well.

2446. Nerve and Bone Liniment.

Take beef's gall 1 quart, alcohol 1 pint, volatile liniment 1 pound, spirits of turpentine 1 pound, oil of organum 4 ounces, aqua ammonia 4 ounces, tincture of cayenne $\frac{1}{4}$ pint, oil of amber 3 ounces, tincture of Spanish flies 6 ounces. Mix.

2447. Black Oils.

Olive (or rape) oil 1 pint, oil of turpentine 2 ounces; mix, and add gradually 6 drams of sulphuric acid; leave the bottle open till cold.

2448. British Oils.

Oil of turpentine,
 Linseed oil, of each..... 8 ounces.
 Oil of amber,
 Oil of juniper, of each..... 4 ounces.
 True Barbadoes tar..... 3 ounces.
 Petroleum 1 ounce.

2449. Exeter Oil.

Rape oil..... 1½ pints.
 Green oil..... ½ plnt.
 Oils of wormwood,
 Rosemary,
 Origanum, of each..... ½ dram.

2450. Exeter Oil.

Green oil 16 pounds.
 Euphorbium,
 Mustard seed,
 Castor,
 Pellitory, of each..... 1 ounce.
 Digest and strain.

2451. Oil for Mange.

Oil of turpentine 1 pint; add to it, very gradually and cautiously, 2 ounces of oil of vitriol, stirring the mixture constantly, then add a quart of linseed oil; from 4 to 8 ounces to be rubbed in with a brush every second day for 3 or 4 times.

2452. White Oils or Egg Oils.

Yolks of 2 eggs, 3 ounces solution of ammonia, 1 ounce oil of origanum, 4 ounces oil of turpentine, a pint of vinegar; mix.

2453. Marshall's Oils.

Linseed oil 1 pound, olive or rape oil 1 pound, green oil ½ pound, oil of turpentine ½ pound, oil of vitriol ½ dram.

2454. Nine Oils.

Train oil 23 pounds, oil of turpentine 6 pounds, oil of bricks 1 pound, oil of amber 1 pound, spirit of camphor 2 pounds, Barbadoes tar 7 pounds, oil of vitriol 2 ounces.

2455. Magnetic Oil.

Oil hemlock 1 ounce.
 Oil cedar 1 ounce.
 Oil origanum 1 ounce.
 Oil cinnamon 1 ounce.
 Oil sassafras 1 ounce.
 Oil wormwood 1 ounce.
 Tincture capsicum 2 ounces.
 Alcohol 1 gallon.

2456. Oil of Spike.

Oil of turpentine 32 ounces.
 Sulphuric acid 2 ounces.
 Barbadoes tar 16 ounces.
 Whale oil 64 ounces.
 Oil of origanum 2 ounces.
 Oil of juniper wood..... 1 ounce.

Gradually add the sulphuric acid to the turpentine, stirring constantly; when cold, add the other ingredients.

2457. Rattlesnake Oil.

Gum camphor 1 ounce.
 Oil cedar ½ ounce.
 Oil sassafras ½ ounce.
 Linseed oil (raw) 1 quart.

2458. Petroleum Liniment.

Kerosene 2 pints.
 Gum camphor 1 ounce.
 Cayenne pepper ½ ounce.

2459. Liniment Phenylated.

Olive oil 95.
 Pure carbolic acid 5.
 Absolute alcohol 1.

2460. Liniment for Rheumatism.

Crude coal oil, 1 pint; strong vinegar, ½ pint; turpentine, ½ pint; mixed, and well shaken. To be rubbed on mornings and nights.

2461. Richball Liniment.

Oil sassafras ½ dram.
 Tincture aconite ½ dram.
 Oil of hemlock 2 drams.
 Oil of cedar 2 drams.
 Oil of origanum 2 drams.
 Oil of turpentine 2 drams.
 Tincture of camphor 2 drams.
 Tincture of capsicum 2 drams.
 Tincture of myrrh 2 drams.
 Chloroform 2 drams.
 Alcohol 1 pint.

2462. Perrin's Liniment.

Add 2 drams aqua ammonia to the above.

2463. Liniment for Scabies in Animals.

Carbolic acid 10 grams.
 Oil rape 150 grams.
 Petroleum 50 grams.
 Tincture of aloes 20 grams.

2464. Liniment for Soreness, Lameness, Swellings, Rheumatism, etc.

Alcohol 4 ounces.
 Spirits turpentine..... 1 ounces.
 Sweet oil..... 4 ounces.
 Aqua ammonia..... 1 ounce.
 Gum camphor..... 1 ounce.
 Oil origanum..... ½ ounce.
 Chloroform..... ½ ounce.

2465. Liniment for Strains and Swellings.

Strong vinegar saturated with common salt, used warm, is good for strains and reducing swellings. One ounce of white vitriol, 1 ounce of green copperas; 2 teaspoonfuls of gunpowder, all pulverized together, and dissolved in 1 quart of soft water, and used cold, rubbing it thoroughly, is one of the best applications known for reducing swellings.

2466. Liniment for Sprains.

Liniment aconite..... 1 part.
 Liniment belladonna..... 2 parts.
 Laudanum..... 1 part.

2467. Stimulating Liniment.

Soft soap..... 4 ounces.
 Camphor 1 ounce.
 Alcohol 2 pints.
 Water of ammonia..... $\frac{1}{2}$ pint.

2468. Stimulating Liniment.

Sweet oil..... 2 ounces.
 Ammonia..... 1 ounce.
 Turpentine..... $\frac{1}{2}$ ounce.

2469. Stimulating Liniment.

Castor oil..... 2 ounces.
 Rape oil..... 2 ounces.
 Turpentine 2 ounces.

Shake and then add:

Strong solution of ammonia 3 ounces.
 Water 3 ounces.

This preparation can be diluted with water in proportion to its own bulk, without losing in appearance.

2470. Stimulating Liniment.

Soft soap, 4 ounces; camphor, 1 ounce; proof spirit, 2 pints; water of ammonia, $\frac{1}{2}$ pint.

2471. Soap Liniment.

Soft soap, 6 ounces; water, 8 ounces; dissolve, and add 1 pint of rectified spirit, in which are dissolved 2 ounces of camphor, 1 ounce oil of rosemary, and 2 to 4 ounces strong water of ammonia.

2472. Liniment for Spilts.

Oil of organum, 1 ounce; spirit of turpentine, 1 ounce; spirit of wine, $\frac{1}{2}$ ounce. To be applied night and morning for a few days, discontinuing it as often as any moisture appears.

2473. Liniment for Sprains, Swellings (Old), Rheumatism, etc.

Spirit of hartshorn, 2 ounces; camphorated spirit, 2 ounces; oil of turpentine, 1 ounce; laudanum, $\frac{1}{2}$ ounce; oil of organum, 1 dram.

2474. Stokes' Liniment.

Oil of turpentine..... 3 fl. ounces.
 Acetic acid..... $\frac{1}{2}$ fl. ounce.
 Yolk of egg..... 1
 Rose water..... 3 fl. ounces.
 Oil of lemon..... 60 drops.

2475. Liniment for Sweeney.

Alcohol and spirits turpentine, of each 8 ounces; camphor gum, pulverized cantharides, and capsicum, of each 1 ounce; oil of spike, 2 ounces; mix. Bathe this liniment in with a hot iron.

2476. Compound Liniment of Turpentine.

Oil of turpentine..... 1 fl. ounce.
 Stronger water of ammonia..... 1 fl. ounce.
 Soap liniment..... 4 fl. ounces.

2477. Tobias' Venetian Liniment.

Spirit ammonia..... 5 parts.
 Camphor 2 parts.
 Tincture capsicum..... 5 parts.
 Alcohol 34 parts.
 Water 10 parts.

2478. Liniment for Sore Back.

Extract of lead, $\frac{1}{2}$ ounce; vinegar, 1 ounce; olive oil, 2 ounces.

2479. Liniments for Itching Humors, Mange, Lice, etc.

Equal parts oil of tar, oil of turpentine, and seal oil. Apply every second day for two or three times, then wash.

2480. Liniments for Itching Humors, Mange, Lice, etc.

Sulphur, 4 ounces; turpentine, 4 ounces; oil of tar and train oil, 6 to 8 ounces. The parts to be first washed with soft soap, and dried.

2481. Liniment for Mange.

Goulard's extract of lead, 2 ounces; olive or rape oil, 2 ounces; sulphur, 1 ounce.

2482. White Liniment.

Oil of turpentine, 2 ounces; solution of ammonia, 2 ounces; soap liniment, 3 ounces; spirit of rosemary, 1 ounce. Mix in the above order, and gradually add, with continual agitation, distilled vinegar, 8 ounces.

2483. White Liniment.

Yolks of eggs..... 12
 Soft soap..... 6 ounces.
 Turpentine 20 ounces.
 Stronger ammonia..... 5 ounces.
 Acetic acid..... 4 ounces.
 Camphor 6 ounces.
 Alcohol 8 ounces.
 Oil of amber..... 4 ounces.
 Water, add..... 4 pints.

Rub the soap gradually with 10 ounces of water to form a smooth jelly; add the spirit with the camphor dissolved in it, mix the turpentine and the oil of amber; add gradually to the mixture, stirring assiduously the while, and aiding emulsification by the occasional addition of a little water. Then add the ammonia. Now transfer to a large bottle, add gradually the acetic acid, diluted with a pint or more of water; add the eggs, one by one, well shaking all the time, and finally make up to 80 ounces with water. The acetic acid may be omitted, and if this is done a perfect liniment is obtained.

2484. White Oil.

Yolks of eggs, 4 in number; oil of turpentine, $\frac{1}{4}$ pint; mix, and add of liquor of ammonia, 3 fluid ounces; oil of origanum, $\frac{1}{2}$ ounce; soaper's lye, $\frac{1}{4}$ pint; water, $\frac{3}{4}$ pint; agitate well, and strain through a coarse hair sieve.

2485. Genuine White Oil Liniment.

Ammonia carbonate..... 10 parts.
Camphor 20 parts.
Oil turpentine..... 21 parts.
Oil origanum..... 20 parts.
Castile soap..... 19 parts.
Water to make 300 parts (by weight).

2486. Liniment for Sore Throat.

Liniment aconite 1 ounce.
Liniment turpentine 3 ounces.
Liniment soap,
 camphorated 2 ounces.
Apply freely to the horse's throat.

VETERINARY OINTMENTS.**2487. Veterinary Ointment.**

Chalk $12\frac{1}{2}$ pounds.
Soft soap..... 5 pounds.
Water 5 quarts.
Heat to the boiling point and add
Chlorinated lime..... 10 ounces.
Water $2\frac{1}{2}$ pints.
Boil until pasty and add
Creolin 5 ounces.
Friar's balsam..... 10 ounces.

The ointment may also be used, when mixed with water, for laundry purposes and as a garden insecticide.

2488. Green Ointment.

Resin ointment 5 ounces.
Verdigris $\frac{1}{4}$ ounce.
Turpentine 2 ounces.
Mutton tallow..... 2 pounds.
Oil of origanum..... $\frac{1}{2}$ ounce.
Tincture of iodine..... $\frac{1}{2}$ ounce.

This is a good remedy for scratches, hoof-evils, cuts, etc.

2489. Ointment for Cracked Heels.

Solution subacetate of lead. 1 ounce.
Olive oil, enough to make.. 20 ounces.
Use as a lotion.

2490. Ointment for Cracked Heels.

Solution subacetate of lead. 1 ounce.
Glycerine 1 ounce.
Water, enough to make.... 20 ounces.
Use as a lotion.

2491. Lotion for Cracked Heels.

Liquor arsenic 1 dram.
Water 16 drams.
Apply twice a day.

2492. Ointment for Cracked Heels.

Lard 1 ounce.
Honey 2 ounces.
Venice turpentine 1 ounce.
Train oil 1 ounce.
Verdigris $\frac{1}{4}$ ounce.
Sulphate of copper..... $\frac{1}{4}$ ounce.
Alum $\frac{1}{4}$ ounce.
Mix them.

2493. Ointment for Cracked Heels and Grease.

Venice turpentine, 4 ounces; wax, 1 ounce; lard, 4 ounces; melt together, and add sugar of lead, 1 ounce (or alum 2 ounces) in fine powder.

2494. Ointment for Cracked Heels and Grease.

Common turpentine, 1 pound; melt and add powdered alum, $1\frac{1}{2}$ pounds; bole, 2 pounds; stir till cold, spread on brown paper, and tie over with list.

2495. Ointment for Cracked Heels and Grease.

Lard, $\frac{1}{2}$ pound; honey, $\frac{1}{2}$ pound; common turpentine, $\frac{1}{2}$ pound; melt, and add powdered alum, 1 pound; white vitriol, 2 ounces; stir till cold.

2496. Ointment for Cracked Heels and Grease.

Citrine ointment, 3 ounces; lard, 2 ounces; turpentine, 2 drams; saturated solution of nitrate of copper, 2 drams.

2497. Remedy for Big Leg and Grease Heel.

Tincture of cantharides.... 2 ounces.
Water of ammonia..... 2 ounces.
Spirits of turpentine..... 2 ounces.
Laudanum 1 ounce.
Chloroform 1 ounce.
Alcohol 4 ounces.

Mix and keep corked for use. Wash the legs well with soap-suds; then apply the remedy with a sponge, repeating the operation in 3 or 4 days if necessary.

2498. Ointment for Horses' Knees.

Mercurial ointment $1\frac{1}{2}$ ounces.
Honey 1 ounce.
Camphor 2 drams.
Burned cork powder..... $\frac{1}{4}$ ounce.

2499. Ointment Marshmallow.

Rape oil 1 pound, yellow wax 6 ounces, palm oil $\frac{1}{2}$ pound, common turpentine 1 ounce.

2500. Suppurating Ointment for Wounds.

Basilicon ointment..... 1 ounce.
Cantharides, in fine powder $\frac{1}{4}$ ounce.
Spirits turpentine..... $\frac{1}{4}$ ounce.

Mix thoroughly. Used to make a wound suppurate or run.

2501. Ointment for Scurvy Heels.

Goulard's extract $\frac{1}{2}$ dram lard 1 ounce; mix. The heels should first be gently rubbed with soap and water.

2502. Ointment for Scurvy or Cracked Heels.

Melt together 3 ounces of white diachylon, 4 ounces of olive oil; mix, and when nearly cold, add 3 drams of sugar of lead in fine powder. First wash the heel, then apply this ointment; or elder ointment 4 ounces, camphor 6 drams, laudanum 2 drams, extract of lead 2 drams; mix.

2503. Healing Ointment for Cracked Heels.

Lard 4 pounds, resin 1 pound; melt together and stir in 1 pound true calamine.

2504. Softening and Cooling Ointment for Cracks and Ulcers on the Heel.

Spermaceiti ointment 4 ounces, olive oil 1 ounce, sugar of lead 2 drams, oxide of zinc 1 ounce.

2505. Ointments for Sore Backs and Saddle Galls.

Camphor 2 drams, oil of rosemary 1 dram, elder ointment or lard 3 ounces.

2506. Ointment for Sore Backs.

Marshmallow ointment 4 ounces, extract of lead 1 ounce.

2507. Ointment for Thrush and Canker.

Blue vitriol 2 ounces, white vitriol 1 ounce, rubbed down and mixed with lard 2 pounds, tar 1 pound; a rledget of tow covered with it to be introduced into the cleft of the frog every night, and renewed in the morning.

2508. Thrush Paste.

Alum, blue vitriol, white vitriol, of each 1 ounce; rub them into a fine powder; melt 2 pounds of tar with 1 pound of lard, and when getting cool stir in the powder.

2509. White Salve.

Pure carbolic acid.....	5
Oil bergamot.....	2
Oil citronella.....	2
White precipitate.....	5
Prepared lard.....	100
Yellow wax.....	$7\frac{1}{2}$

BLISTERS FOR HORSES.**2510. Blistering Liniment.**

Linseed oil..... $\frac{1}{2}$ pint.

Spirit of turpentine..... 2 ounces.

Cantharides, in powder.... 1 ounce.

Euphorbium, in powder... $\frac{1}{2}$ ounce.

Mix and shake them in a bottle for use.

2511. Blistering Liniment.

Pulverized cantharides..... 1 ounce.

British oil..... 1 ounce.

Oil organum..... 1 ounce.

Oil amber (crude)..... 1 ounce.

Spirit of turpentine..... 1 ounce.

Olive oil..... 1 ounce.

Mlx.

Corrosive sublimate..... 1 dram.

Alcohol..... $\frac{1}{2}$ pint.

Mlx and dissolve, then add the other mixture.

Apply to parts affected once a day until it blisters; then dress blister with carbolized ointment. Repeat treatment if necessary.

2512. Blistering Liniment.

Powdered Spanish flies, 1 ounce; spirit of wine, 6 ounces; water of ammonia, 2 ounces. Let it stand for a week, shaking frequently, and strain.

2513. Blistering Liniment.

Flies, 1 ounce; euphorbium, $\frac{1}{2}$ ounce; oil of turpentine, 4 ounces; digest for two or three days and pour off the liquid; digest the flies, etc., in 4 ounces of spirits of wine and 2 ounces of water of ammonia for three or four days, shaking frequently, strain off this liquid, and mix it with the former.

2514. Clater's Strong Liquid Blister.

Spirits of turpentine, colored with alkanet, 1 gallon; powdered flies, 1 pound; macerate for a month, shaking daily, then pour off the clear fluid for use.

2515. Blistering Liniment for Immediate Use.

Spanish flies, in fine powder, 1 ounce; oil of turpentine, 6 ounces. To be rubbed on the belly for inflammation of the bowels.

2516. Blistering Tincture.

Flies, 1 ounce; proof spirit, 8 ounces; macerate two or three weeks; mix and filter. To be rubbed in, and repeated next day if necessary.

2517. Horse Blister.

Spirits turpentine..... 8 ounces.
 Powdered cantharides..... 1 ounce.
 Spirit of ammonia..... 4 ounces.
 Olive oil..... 2 ounces.
 Oil sassafras..... 1 ounce.

Mix. The surface should be washed off with hot water and dried, and then the blistering liquid applied.

2518. Blistering Liquid.

Powdered camphor, 20 parts; chloral, 30 parts; melt at 140 degrees F., and add 10 parts powdered cantharides, agitate for one hour, with heat, but do not let the temperature go above 158 degrees F.; filter. This vesicant liquor may be used with compresses, or painted on with a brush.

2519. Blistering Ointment.

Tar 4 ounces.
 Sulphuric acid..... 2 drams.
 Oil origanum..... ½ ounce.
 Lard 2 ounces.
 Spanish flies..... 2 ounces.

Mix thoroughly.

An excellent blister for a spavin.

2520. Blistering Ointment.

Powdered cantharides..... 1 ounce.
 Powdered resin..... 1 ounce.
 Lard 4 ounces.

Melt the lard and resin together, add the cantharides, and stir until cold.

2521. Blistering Ointment.

Yellow wax..... 3 ounces.
 Lard..... 4 ounces.
 Corrosive sublimate..... 4 drams.
 Powdered cantharides..... 2 ounces.
 Oil of turpentine..... 4 drams.
 Barbadoes tar..... 4 drams.

Mix the wax and lard and stir in the other ingredients, first reducing the corrosive sublimate to impalpable powder.

2522. Horse Blister.

Powdered cantharides 2 drams.
 Camphor 5 grains.
 Oil lavender 10 drops.
 Lard 1 ounce.

Mix thoroughly. Cut the hair from the part and rub in well with the palm of the hand and against the direction of the hair for four or five minutes. The horse should be so tied that he cannot reach the blistered surface until the blister is well raised, and the application should be washed off with soapsuds and smeared daily with lard. The blistering should not be repeated until the effects of the first

have passed off. Several blisterings will doubtless kill the roots of the hair, but one application carefully attended to will not so result.

2523. Blistering Ointment.

Lard ½ ounce.
 Beeswax 3 drams.
 Corrosive sublimate, in powder ½ dram.
 Spanish flies 2 drams.

Mix well, spread on leather and apply to the spavin.

2524. Horse Blister.

Yellow wax 3 ounces.
 Lard 4 ounces.
 Red iodide of mercury..... 4 drams.
 Powdered cantharides 2 ounces.
 Oil of turpentine 4 drams.
 Barbadoes tar 4 drams.

Melt the wax and lard and stir in the other ingredients, first reducing the red iodide of mercury to an impalpable powder.

2525. Caustic Oil.

Croton oil 16 parts.
 Cottonseed oil 144 parts.
 Camphor oil 6 parts.
 Oil of turpentine 12 parts.
 Oil of thyme 3 parts.
 Petrolatum 24 parts.
 Sulphuric acid 3 parts.

2526. Euphorbium Horse Blister.

Powdered cantharides 12 ounces.
 Powdered euphorbium 8 ounces.
 Powdered corrosive sublimate 1 ounce.
 Lard 48 ounces.
 Armenian bole, q. s. to color.

2527. Leeming's Essence.

Cantharides, powdered 4 ounces.
 Euphorbium 1 ounce.
 Bichloride of mercury 1 ounce.
 Methylated spirit 24 ounces.
 Oil of thyme 6 drams.

2528. Liquid Blister.

Cantharides, powdered .. 4 ounces.
 Euphorbium, powdered... ½ ounce.
 Capsicum, powdered ½ ounce.
 Turpentine 2½ ounces.
 Methylic alcohol 17½ ounces.

Mix. Digest 14 days, then strain.

2529. Blister for Ring Bone.

Red iodide of mercury..... 1 dram.
 Lard, enough to make..... 1 ounce.
 Use as an ointment.

SPAVIN, RING BONE, ETC.

2530. Ring Bone.

Gum euphorbium 1 ounce.
 Mercurial ointment $\frac{1}{2}$ 2 ounces.
 Powdered corrosive subli-
 mate $\frac{1}{2}$ ounce.
 Powdered cantharides $\frac{1}{2}$ ounce.
 Spirits of turpentine..... 2 ounces.
 Tincture iodine 1 ounce.
 Mutton tallow 2 pounds.
 Lard 2 pounds.

Melt all together over a water bath; stir until cool. Apply every other day as required.

2531. Ring Bone.

Powdered corrosive subli-
 mate 1 ounce.
 Spirits of turpentine..... 1 pint.
 Mix and dissolve.

Apply to parts affected once a day as required.

2532. Ring Bone.

Pulverized cantharides, oils of spike, origanum, amber, cedar, Barbadoes tar and British oil, of each 2 ounces; oil of wormwood, 1 ounce; spirits of turpentine, 4 ounces; common potash, $\frac{1}{2}$ ounce; nitric acid, 6 ounces; oil of vitriol, 4 ounces, and lard, 3 pounds. Melt the lard slowly and add the acids; stir well and add the others, stirring until cold. Clip off the hair, and apply by rubbing and heating in; in about 3 days, or when it is done running, wash off with suds and apply again. In old cases it may take 3 or 4 weeks, but in recent cases 2 or 3 applications will cure.

2533. Ring Bone.

Take $\frac{1}{2}$ pint spirits of turpentine, $\frac{1}{2}$ ounce bluestone, $\frac{1}{2}$ ounce of red precipitate. Shake well and use every morning, and keep the hoof well greased. This will not only take off the hair, but will cause a severe blister, which, after healing, if there still be signs of lameness, repeat the remedy.

2534. Ring Bone and Spavin.

Venice turpentine and Spanish flies, of each 2 ounces; euphorbium and aqua ammonia, of each 1 ounce, red precipitate, $\frac{1}{2}$ ounce; corrosive sublimate, $\frac{1}{4}$ ounce; lard, $1\frac{1}{2}$ pounds. Pulverize all and put into the lard; simmer slowly over coals, not scorching or burning, and pour off, free of sediment. For ringbones, cut off the hair and rub the ointment well into the lumps once in 48 hours. For spavins, once in 24 hours for 3 mornings. Wash well previous to each application with suds, rubbing over the place with a smooth stick, to squeeze out the thick, yellow matter.

2535. Incipient Ring Bone.

Acetic acid..... 1 ounce.
 Tincture of arnica..... 2 drams.
 Solution subacetate of lead 1 dram.
 Alcohol 1 or 2 ounces.
 Water enough to make.... 16 ounces.
 Make a lotion.

2536. Spavin.

Take $\frac{1}{2}$ ounce oil of amber, 1 ounce oil of spike, 2 ounces spirits of turpentine, $\frac{1}{2}$ ounce nitric acid. The acid must be put into the pot the last. Apply this mixture thoroughly, and—though it will not remove the bunch—the lameness will generally disappear. If the horse is over 4 years old, fit a bar of lead just above it, wiring the end together so that it will constantly wear upon the enlargement, and the two together will cure nine cases out of every ten in six weeks.

2537. Spavin.

Take 1 ounce of origanum oil, 1 ounce of British oil, 1 ounce of oil of spike, 1 ounce oil of wormwood, 1 ounce gum myrrh, 1 gill of alcohol. Put the oils together; put the gum in the alcohol, and let it stand for 24 hours, and then add to the oils; shake well before using; apply to the parts affected and rub it in well with the hand, or heat it in with a hot iron. If it is applied for a sprain, use it morning and evening. Wash clean once in 3 days.

2538. For Bone Spavin.

Tincture of iodine..... 1 ounce.
 Euphorbium 1 ounce.
 Corrosive sublimate..... 1 ounce.
 Red precipitate..... 1 ounce.
 Spanish flies..... 1 ounce.
 Camphor gum..... 1 ounce.
 Oil origanum..... 1 ounce.
 Oil amber..... 1 ounce.
 Spirits of ammonia..... 1 ounce.
 Spirits of turpentine..... 1 ounce.

2539. Spavin.

Camphor $2\frac{1}{2}$ ounces.
 Oil of turpentine..... 30 ounces.
 Oil of rosemary..... 1 ounce.
 Iodine 3 ounces.
 Alcohol 5 pints.
 Water 2 pints.

Dissolve the camphor in the oils and the iodine in the alcohol, mix, and add the water.

2540. Ointment for Bone Spavin.

Iodine 2 drams.
 Iodide of potash..... 1 dram.
 Sulphuric acid..... 2 drams.
 Palm oil..... 4 drams.

To be applied once a day.

2541. Splint and Spavin.

Oil of origanum..... 6 ounces.
 Gum camphor..... 2 ounces.
 Mercurial ointment..... 2 ounces.
 Iodine ointment..... 1 ounce.

Melt by putting all into a wide-mouthed bottle, and setting it in a bottle of hot water. Apply it to bone spavins or splints twice daily for four or five days.

2542. Ointment for Spavins, Splints and Ring Bones.

Beeswax 4 ounces.
 Hog's lard..... 2 ounces.
 Train or tanner's oil..... ½ pint.
 Gum turpentine, or
 Canada balsam..... 6 ounces.

Simmer over a slow fire till dissolved, then put them in a jar and add:

Spirits of turpentine..... 4 ounces.
 Corrosive sublimate, powdered ½ ounce.
 Euphorbium,
 Cantharides, in powder,
 of each 2 ounces.

Stir, and when nearly cold, add sulphuric acid, ½ ounce, then stir the whole until it hardens.

HOOF APPLICATIONS.**2543. Cement for Horses' Hoofs.**

To fill cracks and fissures in the hoofs of horses, a cement is required which resists the action of water and possesses great elasticity combined with solidity. The following compound answers all demands:

Gum ammoniac..... 10 parts.
 Purified gutta-percha.... 20 to 25 parts.

The gutta-percha is heated from 195 to 212 degrees F., and the powdered gum kneaded into it until a homogeneous mass is formed. The place to be cemented should be thoroughly cleansed. The cement is heated until it becomes soft, and the crack in the hoof filled with it by means of a heated knife. It becomes hard when cooled off to the ordinary temperature, and acquires in a short time such a degree of solidity that nails may be driven into it.

2544. Hoof Dressing.

A good preparation, and one that will give the horse's hoof a rapid and healthy growth, is to take of oil of tar, 1 pint; beeswax, 1½ pounds; whale oil, 4 pints. The above ingredients should be mixed and melted together over a slow fire, and applied to all parts of the hoof at least once or twice a week.

2545. Hoof Liniment.

Neatsfoot oil..... 4 ounces.
 Turpentine..... 2 ounces.
 Oil tar..... 3 ounces.
 Oil origanum..... 1½ ounces.

2546. Hoof Liquid.

Linseed oil..... ½ pint.
 Spirits turpentine..... 4 ounces.
 Oil of tar..... 6 ounces.
 Oil origanum..... 1½ ounces.

Apply all around the hoof (top) down one inch every day. If for split hoof, apply every day.

2547. Hoof Liquid.

Oil of tar and fish oil, of each equal parts. Apply as directed in the above.

2548. Hoof Ointment.

Take ½ pound of lard and 4 ounces of resin. Heat them over a slow fire until melted; take the pot off the fire, add 1 ounce of pulverized verdigris; stir well to prevent it from running over. When partially cool add 2 ounces of turpentine. Apply it from the hair down 1 inch. Work the horse all the time.

2549. Hoof Ointment.

Suet..... 100.0
 Yellow wax..... 20.0
 Black pitch..... 20.0
 Tar 20.0
 Lampblack..... 10.0

2550. Hoof Ointment.

Camphor 1 ounce.
 Oil of origanum..... 1 ounce.
 Pure lard..... 1 pound.
 Mix and apply once every week or two.

2551. Hoof Ointment.

Equal parts of wax, olive oil, lard, veal suet, turpentine and honey; melt the wax, suet and lard with the oil by a gentle heat; remove from the fire and add the honey and turpentine, stirring till cold. When intended to embellish the hoof as well as soften it, it may be colored with lamp black or ivory black.

2552. Hoof Ointment.

Tallow, 4 pounds; beeswax, 4 ounces; tar, ½ pound; melt slowly, remove from the fire, and when they begin to cool, stir together. A portion of pitch may be added when intended to fill fissures, etc.

2553. Hoof Ointment.

Ammoniac, purified..... 30 parts.
 Turpentine (oleoresin)..... 10 parts.
 Gutta percha..... 60 parts.

Melt the first two ingredients in a steam-bath, and gradually add, while stirring, the gutta percha. For use, soften the mass in hot water and then press into the previously-cleaned hoof fissure. The cement may be colored black by incorporating 2 parts of lampblack.

2554. Hoof Bound Wash.

Spirits of turpentine..... 4 ounces.
 Tar..... 4 ounces.
 Whale oil..... 8 ounces.

Mix, and apply to hoofs often.

2555. Lotion for Cracked Hoofs.

Zinc sulphate..... 1 ounce.
 Lead acetate..... 1 ounce.
 Water..... 1 quart.

2556. Composition for Sand Cracks.

Beeswax, 4 ounces; yellow resin, 2 ounces; common turpentine, 1 ounce; tallow, $\frac{1}{2}$ ounce; melt together, fill the cracks with the composition, and turn the horse out to grass.

2557. Split or Broken Hoof.

Let the blacksmith bore two holes on each side of the crack or split; pass long nails through the holes and clinch tight. After anointing with the hoof-bound liquid it will soon grow together.

2558. To Toughen Hoofs.

Wash them frequently in strong brine, and turn brine upon the bottoms, and soak a few minutes each time.

MISCELLANEOUS HORSE REMEDIES.

2559. Acetum Vulnerarium.

Powdered alum..... 5 parts.
 Water..... 100 parts.
 Pyroligneous vinegar..... 150 parts.
 Alcohol..... 20 parts.

2560. A Blaze or Star in a Horse's Face.

Take a razor and shave off the hair the form and size you wish the blaze or star to be made; then take a small quantity of oil of vitriol and with a feather anoint the part once, which will be quite sufficient. After the application of the vitriol the part will become a little sore and inflamed, which may be readily removed and healed by washing the sore with copperas water. Great care should be used to prevent the

vitriol from getting on the surrounding skin or upon the clothing. This may be somewhat cruel, but it is one of the methods used by jockeys for the purpose.

2561. Eye Water, for Horses.

Acetate of lead and sulphate of zinc, of each $\frac{1}{2}$ dram; dissolve them separately in $\frac{1}{2}$ pint of boiled water; mix and filter.

2562. Eye Water, for Horses.

Solution acetate of ammonia, 3 ounces; rose water, 6 ounces.

2563. Eye Water, for Horses.

Tincture of opium, 2 drams; water, 8 ounces; extract of lead, 1 dram.

2564. Eye Water, for Horses.

Brandy, 1 ounce; vinegar, 1 ounce; tincture of opium, 2 drams; rose water, 8 ounces.

2565. For Watery, Bloodshot Eyes.

Burnt alum, 1 ounce; calcined white vitriol, 1 ounce; boiling water, 3 pints.

2566. Epizootic.

Sweet spirits of nitre 1 ounce.
 Tincture aconite root 1 ounce.
 Tincture belladonna root.... 1 ounce.
 Tincture opium 1 ounce.

Give 1 teaspoonful three or four times per day for first day, then only three times per day.

2567. Fuller's Leg Wash.

Ammonium hydrochlorate .. 4 drams.
 Tincture asafoetida 4 drams.
 Tincture aconite root 2 ounces.
 Acetic acid 8 ounces.

Mix. From 2 to 4 teaspoonfuls of the mixture are used to 1 pint of water, as an embrocation.

2568. Mange Lotion.

White hellebore, 2 ounces; tobacco, 2 ounces; water, 3 pints. Boil, strain, and add when cold a pint of fresh lime water.

2569. Mange Lotion.

Boil 4 ounces of white hellebore in 3 pints of water to 2 pints, add corrosive sublimate 2 drams, previously dissolved in 3 drams of muriatic acid.

2570. Mange Lotion.

Boil 2 ounces of tobacco in a quart of water; strain, and add common salt 3 ounces, soap 2 ounces.

2571. Mange Lotion.

Acid nitrate of mercury, 2 drams; distilled water, 16 ounces.

2572. Linseed Mash (Hind's Cooling Decoction).

Linseed, 2 quarts; coarse sugar, 2 ounces; boiling water, 6 quarts. Simmer for three or four hours.

2573. Mash.

Bran or pollard, $\frac{1}{2}$ peck. Put it in a bucket and pour on it enough scalding water to wet it thoroughly. Let it be well stirred with a stick, or worked with the hands, and let it stand, covered up, until new-milk warm. Emollient and slightly laxative. When intended to be nutritive, oats should be scalded with the bran.

2574. Bran Mash.

Put half a peck of bran into a bucket and pour on it enough scalding water to wet it thoroughly. Stir well with a stick, or work with the hands. Let it stand, covered up, until lukewarm. Bran mash is cooling and slightly laxative. The bran should always be freshly ground. When intended to be nutritive, oats should be scalded with the bran.

2575. Saddle and Harness Galls.

Sulphuric acid 1 dram.
Alum, dried 2 drams.
Water, enough to make 8 ounces.
Use as a lotion.

2576. Saddle Galls.

White lead and linseed oil, mixed as for paint, is unrivalled for healing saddle, harness or collar galls and bruises. Apply with a brush. It soon forms an air-tight coating and soothes the pain, promptly assisting nature.

2577. Scratches.

Cut off the hair close, and wash the legs in strong soapsuds or urine, or wash with warm vinegar saturated with salt, and afterwards dress over with a small quantity of hog's lard.

2578. Scratches.

Red oxide mercury..... 50 grains.
Saturated solution camphor in turpentine (allow to stand over night) 50 drops.
Amber petrolatum, quantity sufficient..... 500 grains.

2579. Scratches.

Balsam sulphur..... 1 ounce.
Clean the parts thoroughly and apply the above twice each day.

2580. Astringent for Scours or Diarrhoea.

Alum, powdered..... 2 ounces.
Catechu, powdered..... 1 ounce.
White oak bark..... 2 ounces.
To be given in gruel, and repeated if necessary.

2581. Cure for Staggers.

Give a mess twice a week, composed of bran, 1 gallon; sulphur, 1 tablespoonful; saltpetre, 1 spoonful; boiling sassafras tea, 1 quart; asafoetida, $1\frac{1}{2}$ ounces. Keep the horse from cold water for half a day afterwards.

2582. Styptic Stone.

For saddle galls, kicks, sprains, bruises, ulcers, and as a collyrium. Sulphate of iron 8 ounces, sal ammoniac, sulphate of zinc, and oxide of copper, each 1 ounce; mix, and melt together with gentle heat. About the size of a nut of this compound to be dissolved in a quart of warm water and applied with compresses renewed every 3 or 4 hours.

2583. Typhoid in Horses.

Quinine sulphate..... 4 grams.
Salicylic acid..... 10 grams.
Powdered valerian,
Powdered althaea,
of each 100 grams.
In one dose, daily.

2584. Water Farcy.

Fowler's solution..... 2 ounces.
Spirits nitrous ether..... 3 ounces.
Water, quantity sufficient. 16 ounces.

Tablespoonful in $\frac{1}{2}$ pail of water 3 times each day. By taking a small quantity of the contents of the pail and rubbing on the horse's nose he will readily drink the mixture.

REMEDIES FOR CATTLE.

2585. Black Mixture.

Tar ointment $\frac{1}{2}$ ounce.
Burnt sugar $\frac{1}{2}$ ounce.
Turpentine 4 ounces.

Mix the ointment with a little of the turpentine and stir in the burnt sugar; then add the rest of the turpentine.

2586. Cure for Swelled Bags in Cows.

Gum camphor, $\frac{1}{2}$ ounce, to sweet oil 2 ounces; pulverize the gum, and dissolve over a slow fire.

2587. Swollen Udders in Cows and Sheep.

Bleached linseed oil..... 4 ounces.
Glycerine 1 ounce.
Saccharated solution of
lime $\frac{1}{2}$ ounce.
Water, quantity sufficient. 12 ounces.

Mix the last three liquids and shake up the oil with the mixture.

2588. Cattle Condiment.

Table salt	2 pounds.
Barley meal	2 pounds.
Ground rice	1 pound.
Pea meal	1 pound.
Linseed meal	1 pound.
Powdered gentian	¼ pound.
Powdered fennel	¼ pound.
Powdered fenugreek	¼ pound.

Mix. A few tablespoonfuls with each morning and evening feed.

2589. Cattle Fattening Powder.

Iceland moss	100 parts.
Speedwell herb	15 parts.
Anise seed	5 parts.
Caraway seed	5 parts.

Ground together and added in small portions to fodder as an appetizer and fattener.

2590. Spiced Cattle Food.

Locust bean meal, 6 hundredweight; Indian meal, 10 hundredweight; linseed cake meal, 3 hundredweight; sulphur, 37 pounds; saltpetre, 37 pounds; common salt, 37 pounds; fenugreek, 20 pounds; gentian, 10 pounds; sulphate of iron, 5 pounds; aniseed, 4 pounds; ginger (ground), 3 pounds.

2591. Diarrhoea in Cows.

Lactic acid.....	10 grams.
Molasses	200 grams.
Infusion chamomile (3:100)	1,000 grams.

The whole to be given in 2 days.

2592. Drench.

Glauber's or Epsom salts, 16 ounces (or in bad cases, with fever, 24 ounces); caraways, 1 ounce; warm gruel, a quart.

2593. Drench.

Sulphur, 8 ounces; ginger, ½ ounce; warm gruel, a quart. In rheumatism or joint felon.

2594. Drench.

Common salt, 6 ounces; flour of mustard, a tablespoonful; grated ginger or ground pepper, of either a teaspoonful; gin, ¼ pint; water, 2 pints.

2595. Drench in Red Water.

Sulphate of magnesia, 8 to 16 ounces; sulphur, 2 to 6 ounces; carbonate of ammonia, ½ ounce; ginger, ½ ounce; warm water, q. s. A fourth of this every 6 hours till the bowels are sufficiently acted on.

2596. Mild Laxative and Tonic Drench.

Epsom salts, ½ pound; sulphur, 4 to 6 ounces; ginger, ½ ounce; gentian, ½ ounce; warm water q. s.

2597. Drench in Flatulent Colic With Costiveness.

Aloes, 1½ ounces; carbonate of potash, 3 drams; ginger, ½ ounce; warm water, a pint; linseed oil, 8 ounces.

2598. Laxative Drink for Cows That Are Kept on Hay.

Aloes, 4 drams; ginger, 1½ drams; water, a quart; Epsom salts, 6 ounces; carbonate of soda, ½ ounce. For one dose.

2599. Drench for Inflammation of the Liver.

After bleeding, give: Calomel, 1½ drams; opium, ½ dram; ginger, 2 drams; thick gruel, q. s. Six hours afterwards, give Epsom salts, 1 pound; sulphur, 6 ounces; linseed oil, ½ pint; gruel, q. s.

2600. Drench for Inflammation of the Liver.

Epsom salts, 1 pound; caraway, ½ ounce; Barbadoes aloes, ¼ ounce; in a quart of warm gruel. After the yellowness appears, give half of this quantity with 20 grains of calomel, morning and night.

2601. Drench for Bloody Urine.

Linseed oil, 1 pint; gruel, 1 pint; caraways, 2 drams; Epsom salts, 8 ounces (in warm water, ½ pint); tincture of opium, 2 drams.

2602. Drench for Red Water.

Epsom salts, 8 to 12 ounces; sulphur, 2 to 4 ounces; carbonate of ammonia, ½ ounce; ginger, ½ ounce; warm water, 4 pints. Give a fourth part every 6 hours till the bowels are acted on.

2603. Drench for Red Water.

Glauber salts, 12 ounces; carbonate of soda, ½ ounce; nitre, ¼ ounce; sugar, 1 ounce; powdered caraways, ½ ounce, in a quart of gruel. After the bowels are well open, give astringents or mild stimulants.

2604. Drench for Jaundice or Yellows.

Chloride of sodium, ½ ounce; carbonate of soda, ½ ounce; turmeric, 2 ounces; Glauber salts, 6 ounces; powdered gentian and chamomile, 2 drams; gruel, q. s.

2605. Drench for Jaundice or Yellows.

Castile soap, ½ ounce; Venice turpentine, ½ ounce; ginger, 3 drams; gentian, 1 ounce; rub the soap and turpentine in a mortar, and gradually add a pint of water, and afterwards the ginger and gentian.

2606. Drench for Jaundice or Yellows.

Powdered cumin seed, aniseed, and turmeric, of each 2 ounces; grains of paradise and salt of tartar, each 1 ounce; mix. Slice 1 ounce of castile soap to mix with 2 ounces of treacle. Pour a quart of boiling ale upon all of the ingredients, and administer when lukewarm. To be repeated two or three times a day.

2607. Febrifuge Tonic Drench.

Antimonial powder, $\frac{1}{2}$ dram; camphor, 1 dram; Peruvian bark, 1 ounce; gruel, or decoction of arrowroot, or starch, q. s. for two doses.

2608. Febrifuge Tonic Drench.

In the decline of fevers and influenza. Emetic tartar, $\frac{1}{2}$ dram; nitre, 2 drams; gentian, 3 drams; chamomile, 1 dram; ginger, $\frac{1}{2}$ dram; pour on them a pint of boiling ale, and give when cool.

2609. Febrifuge Tonic Drench.

Emetic tartar, $\frac{1}{2}$ dram; gentian, 2 drams; digitalis, $\frac{1}{2}$ dram; nitre, $\frac{1}{2}$ ounce; spirit of nitrous ether, 4 drams; gruel, q. s.

2610. Worm Drench.

For cough from worms. Oil of turpentine, 2 ounces; sweet spirits of nitre, 1 ounce; laudanum, $\frac{1}{2}$ ounce; mix, and give in a pint of gruel.

2611. Cleansing Drink.

Juniper berries, 3 ounces; birthwort, 2 ounces; fenugreek, 1 ounce; spermaceti, 2 ounces; antimony, 1 ounce; saffron, $\frac{1}{2}$ ounce; in a quart of warm ale.

2612. Cleansing Drink.

Resin, soap, of each $\frac{1}{2}$ ounce; spermaceti, $\frac{1}{2}$ ounce; aniseed, caraway seed, of each, 1 ounce; ginger, $\frac{1}{2}$ ounce; treacle, 4 ounces; warm gruel, a quart.

2613. Garget Ointment.

Spirit of camphor..... 1 ounce.
Mercurial ointment..... 1 ounce.
Elder ointment..... 8 ounces.

2614. Ringworm in Cattle.

Carbolic acid..... 2 parts.
Glycerine..... 17 parts.
Water..... 17 parts.
To be applied night and morning.

REMEDIES FOR HOGS AND SHEEP.**2615. Hoof Ail in Sheep.**

Muriatic acid and butter of antimony, of each, 2 ounces; white vitriol, pulverized, 1 ounce; mix. Lift the hoof and drop a little of it on the bottom, only once or twice a week. It kills the old hoof and a new one soon takes its place.

2616. Arsenical Sheep Dip Powder.

White arsenic..... 1 pound.
Sulphur 12 ounces.
Mix. This quantity is for 40 gallons of water.

Boil the water and add the powder to it, along with 1 pound of washing soda or a 1-pound packet of soap powder; continue to boil for ten minutes, and allow to cool, when the wash is ready for use.

2617. Carbolic Sheep Dip.

Dissolve 40 pounds of soap in 10 gallons of water and add 10 pounds of pearl ash before bringing it to a boil. To this solution add two quarts of carbolic acid and the dip is finished. The soap generally used is made of 1 pound of caustic potash, with 1 pint of water and 4 pounds of tallow.

2618. Law's Sheep Dip.

Tobacco 16 pounds.
Oil of tar 3 pints.
Soda ash 20 pounds.
Soft soap 4 pounds.
Water 50 gallons.
Steep the tobacco and add the other ingredients to the solution.

2619. Texas Tobacco Dip for Sheep.

Tobacco 30 pounds.
Sulphur 7 pounds.
Concentrated lye 3 pounds.
Water 100 pounds.
Steep the tobacco in three successive portions of water, expressing each time; then add the other ingredients to the solution, and stir well while in use.

2620. Sheep Wash.

Arsenious acid 6 ounces.
Carbonate potassium 6 ounces.
Water 14 gallons.
Boil together for half an hour.

2621. To Mark Sheep Without Injury to the Wool.

To 30 spoonfuls of linseed oil add 2 ounces of litharge, 1 ounce of lampblack. Boil all together and mark the sheep therewith.

2622. Hog Cholera.

No form of treatment has yet been found which is in every way satisfactory. The disease is a contagious one, and preventive measures and the enforcement of proper sanitary regulations are worth as much, if not more than medicine.

Iron carbonate	5 parts.
Sodium chloride	5 parts.
Potassium carbonate	5 parts.
Sulphur	5 parts.
Calcium oxide	5 parts.
Magnesium carbonate	10 parts.
Soap	10 parts.
Chalk	60 parts.
Carbolic acid	5 parts.

Give $\frac{1}{4}$ of an ounce of the mixture at each feed, well mixed with the food.

2623. Hog Cholera.

Calcium phosphate, precipitated	16 parts.
Chalk	12 parts.
Magnesium carbonate	4 parts.
Capsicum	1 part.

2624. Hog Cholera.

Sodium bicarbonate	2 parts.
Gentian root	2 parts.
Ginger	3 parts.
Sodium nitrate	1 part.
Chalk	8 parts.

As a prophylactic, give 1 to 2 teaspoonfuls twice a day; as a cure, give 1 tablespoonful three or four times a day.

2625. Hog Cholera.

Potassium nitrate	4 ounces.
Black antimony	4 ounces.
Gentian, in powder	4 ounces.
Resin	8 ounces.
Turmeric	8 ounces.
Madder	8 ounces.
Sublimed sulphur	8 ounces.

2626. Hog Cholera.

Red oxide of iron	5 ounces.
Salt (common)	5 ounces.
Potassium carbonate	5 ounces.
Sulphur	5 ounces.
Magnesium carbonate	10 ounces.
Powdered soap	10 ounces.
Prepared chalk	4 pounds.
Carbolic acid	5 ounces.

Mlx. Two drams to be given with each feed.

2627. Pock Liniment for Swine.

Linseed oil	60 grams.
Yolks of eggs	2.
Pure carbolic acid	4 grams.

DOG REMEDIES.**2628. Astringent Balls.**

Catechu, $1\frac{1}{2}$ drams; sulphate of quinine, 20 grains; opium, 5 grains; ginger, 1 dram; conserve of roses, quantity sufficient to form a mass, to be divided into 8, 6, or 4 balls.

2629. Astringent Balls.

Prepared chalk, 2 ounces; powdered gum arabic, $\frac{1}{2}$ ounce; powdered catechu, $\frac{1}{2}$ ounce; powdered oak bark, $\frac{1}{2}$ ounce; powdered ginger, $\frac{1}{4}$ ounce; opium, 15 grains; palm oil, 1 ounce; beat well together. Dose, $\frac{1}{2}$ dram to 2 drams, morning, noon and night, in the advanced stage of distemper.

2630. Astringent Balls.

Opium, 5 grains; catechu, 2 drams; gum arabic, 2 drams; ginger, $\frac{1}{2}$ dram; syrup of poppies, quantity sufficient. Divide into 12, 9, or 6 balls: in diarrhoea.

2631. Astringent Balls.

Myrrh, 1 dram; ipccacuanha, 1 scrupie; opium, 3 grains; chalk, 2 grains; carbonate of iron, 1 dram. For 12, 9, or 6 balls.

2632. Astringent Balls.

In obstinate cases: Alum, 1 dram; chalk, 2 drams; opium, 6 drams; resin, 3 drams; into 4, 6, or 8 balls.

2633. Astringent Balls.

In diarrhoea: After 1 to 4 drams of Epsom salts; prepared chalk, 1 to 3 scruples; catechu, 5 to 10 grains; opium, $\frac{1}{2}$ to 2 grains; twice a day.

2634. Cough Balls, in Asthma, etc.

Calomel, 3 grains; foxglove, 3 grains; cream of tartar, 1 dram; antimonial powder, 12 grains; honey to form 6 boluses. One twice a day.

2635. Cough Balls, in Asthma, etc.

Digitalis, 20 grains; antimonial powder, 40 grains; nitre, 2 drams; sulphur, 3 drams; palm oil, 3 drams, or quantity sufficient. Divide into 10, 15 or 20 balls, according to the size of the dog, morning and night, interposing an emetic every third or fourth day.

2636. Cough Balls, in Old Cases.

Powdered squill, $\frac{1}{2}$ grain to 1 grain; gum ammoniac, 5 grains; balsam of Peru, 8 grains; benzoic acid, 1 grain; balsam of sulphur to form a ball.

2637. Cough Balls, in Asthma, etc.

Extract of hemlock, $\frac{1}{2}$ dram; extract of henbane, 10 grains; powdered digitalis, 20 grains; conserve of roses to form a mass. Divide into 8, 10 or 6 balls. One night and morning.

2638. Digestive Pills.

Sulphur	35.0
Valerian root,	
Jalap, of each.....	30.0
Green hellebore root.....	6.0
Althaea root.....	15.0
Water, quantity sufficient.	

Make a mass and divide into 60 or 30 pills, for small or large dogs.

2639. Distemper.

Turpeth mineral, 1 to 3 grains; asafoetida, $\frac{1}{2}$ dram; aloes, 20 grains; soap, 10 grains; syrup of poppies to form a ball. To be preceded by an emetic, and given every third day.

2640. Distemper.

After an emetic, give a physic ball; and afterwards the following two or three times a day: Antimonial powder, 2, 3 or 4 grains; nitre, 5, 10 or 15 grains; ipecacuanha, 2, 3 or 4 grains; form a ball. If the disease proceed to the debilitating stage, a tonic ball; in the putrid or malignant stage give astringent ball.

2641. Distemper.

Give a third of a paper of James' powder mixed with butter, and afterwards warm broth or milk. In two hours, another third; and if this neither vomits nor purges, give the other third at the end of four hours.

2642. Distemper.

Camphor, 3 to 5 grains; charcoal, 10 grains; opium, 1 grain; aromatic confection, quantity sufficient to form a ball. In the malignant stage, with diarrhoea.

2643. Distemper Balls.

Tartar emetic.....	3 grains.
Calomel	18 grains.
Powdered jalap.....	1 dram.

2644. Distemper Powder.

Nitrate of potash.....	4 drams.
Black antimony.....	2 drams.
Sulphur	1 dram.
Fennel (powdered).....	1 dram.

Mix. From 10 to 30 grains of this is sufficient for a dose.

2645. Pills for Distemper.

Antimonial powder.....	2½ grains.
Mercury with chalk.....	2 grains.
Dover's powder	3 grains.
Quinine sulphate	1½ grains.
Extract nux vomica.....	¼ grain.

Make into 1 pill, one such to be given twice or three times a week.

2646. Epileptic Fits.

Commercial zinc oxide.....	2.0
Purified sulphur,	
Jalap, of each.....	6.0
Green hellebore.....	2.0
Extract chamomile.....	5.0

Make into 120 pills for small dogs and into 90 pills for large dogs.

2647. Mange.

Aloes, finely powdered.....	1 dram.
Spirits turpentine.....	1 ounce.
Sulphur	3 ounces.
Lard	4 ounces.

2648. Mange.

Benzine	10 ounces.
Oil of cade.....	3 ounces.
Coal tar.....	3 ounces.
Soft soap.....	3 ounces.
Turpentine.....	3 ounces.

Rub the soap and tar together in a mortar; then add the oil of cade; when perfectly smooth add gradually the turpentine and benzine.

2649. Mange.

Sperm oil.....	8 ounces.
Kerosene oil.....	8 ounces.
Acid carbolic.....	½ ounce.
Tar	1 ounce.
Sulphur	1 ounce.

Rub in the sore.

2650. Mange.

Sulphur	4 ounces.
Sal ammoniac.....	½ ounce.
Aloes	1 dram.
Venice turpentine.....	½ ounce.
Lard	6 ounces.

Mix them. After four applications wash well with soap and water.

2651. Mange Ointment.

Sulphur	2 ounces.
Powdered aloes.....	2 drams.
Spirits of turpentine.....	12 drams.
Mercury ointment.....	2 drams.
Lard	4 ounces.

Mix, and apply twice daily.

2652. Red Mange.

Charcoal, 1 ounce; chalk, 1 ounce; sugar of lead, 1 dram; white precipitate, 2 drams; sulphur, 2 ounces; lard, 5 ounces.

2653. Wash for Red Mange.

Corrosive sublimate, 20 grains; spirit of wine, 2 drams; dissolve and add milk of sulphur, $\frac{1}{2}$ ounce; lime water, $\frac{1}{2}$ pint. Apply by means of a sponge.

2654. Balls for Red Mange.

Calomel 6 grains.

Powdered jalap 6 grains.

Tartar emetic..... 2 grains.

Glycerite of tragacanth, q. s.

Mass, and divide into 4 balls. Give 1 ball every morning.

2655. For Scabby Mange.

Sulphur, 4 ounces; sal ammoniac, $\frac{1}{2}$ ounce; aloes, 1 dram; Venice turpentine, $\frac{1}{2}$ ounce; lard, 6 ounces; mix. After 4 applications, wash well with soap and water.

2656. For Scabby Mange.

Horse turpentine and palm oil, each $\frac{1}{2}$ pound; train oil, $\frac{1}{2}$ pint; melt together, and while cooling, stir in 3 pounds of flowers of sulphur.

2657. For Scabby Mange.

Charcoal powder, 2 ounces; sulphur, 4 ounces; salt of tartar, 1 dram; Venice turpentine, $\frac{1}{2}$ ounce; lard, 6 ounces.

2658. Purgative Remedy for Dogs.

Calomel 12 grains.

Aloes 3 drams.

Opium 1 grain.

Mix and make into 8 balls and give 1 every 4 or 5 hours till the bowels are relieved.

2659. Tonic for Dogs.

Fowler's solution..... 1 dram.

Syrup of ginger..... 3 drams.

Water 5 ounces.

A tablespoonful 3 times a day.

Useful in skin diseases, and in chorea or other nervous afflictions following distemper.

2660. Worms.

Carbonate of iron, $\frac{1}{2}$ ounce; Aethiops mineral, $\frac{1}{2}$ dram; gentian, 1 ounce; ginger, $\frac{1}{2}$ ounce; levigated glass, 1 ounce; palm oil, 9 drams; beat well together. Dose, from $\frac{3}{4}$ to 2 drams.

2661. Worms.

Aloes, sulphur, prepared hartshorn, and juice of wormwood, made into a mass; the size of a hazel nut to be given 3 times a week, fasting, wrapped in butter.

2662. Worms.

Jalap 10 to 15 grains; calomel, 2 to 3 grains; mixed with butter; no cold liquid should be allowed.

2663. Worms.

Santonin 2 grains.

Powdered glass 3 grains.

Powdered areca nut..... 5 grains.

Powdered jalap 5 grains.

Make one pill.

Dog pills are more easily given for being bulky.

2664. Worms.

Santonin 0.3 grams.

Castor oil 30 grams.

Tablespoonful daily, with milk or meat. Shake well before using.

2665. Tapeworm in Dogs.

Oil of turpentine, $\frac{1}{2}$ dram, mixed with yolk of egg; for very large dogs, 2 scruples. Some writers prescribe larger doses (1 to 2 drams), but these sometimes prove fatal.

2666. Worms.

Powdered areca nuts, 8 grams (2 drams); mutton suet, a sufficient quantity. Divide into 8 pills—at once, or in two doses at intervals of 3 hours.

POULTRY.

2667. Poultry Powder.

Powdered mustard 20 ounces.

Powdered fenugreek 15 ounces.

Ground oyster shells..... 12 ounces.

Ground bone 8 ounces.

Powdered sodium sulphate 4 ounces.

Powdered capsicum 10 ounces.

Sulphate of antimony..... 10 ounces.

Oxide of iron..... 10 ounces.

Corn flour 20 ounces.

Powdered gum asafoetida. 1 ounce.

2668. Powder to Make Hens Lay.

Powdered red pepper..... 2 ounces.

Powdered allspice 4 ounces.

Powdered ginger 6 ounces.

Mix well together. A tablespoonful to be mixed with every pound of food and fed 2 or 3 times a week. Also feed fresh meat, finely chopped.

2669. Powder to Make Hens Lay.

Powdered egg shells..... 4 ounces.

Sulphate of iron..... 4 ounces.

Powdered capsicum 4 ounces.

Powdered fenugreek 2 ounces.

Powdered black pepper..... 1 ounce.

Silver sand 2 ounces.

Powdered dog biscuit..... 6 ounces.

Mix.

A tablespoonful to be mixed with sufficient meal or porridge to feed 20 hens.

2670. Incubator.

For promoting egg-laying, mix together in due proportions sulphur, licorice powder, wheat flour, fenugreek, and caraway.

2671. Worms in Poultry.

Alum	4 ounces.
Armenian bole.....	20 grains.
Cayenne pepper	20 grains.
Essence of bergamot.....	2 minims.

Powder thoroughly and mix. A teaspoonful mixed with their food and administered daily suffices for forty chickens, turkeys or pheasants.

2672. Imperial Egg Food.

Oyster shells, in coarse powder	2,400 parts.
Carbonate lime.....	380 parts.
Phosphate lime.....	380 parts.
Powdered black pepper...	500 parts.
Powdered red pepper.....	40 parts.
Oxide iron.....	60 parts.
Chlorides, phosphates and sulphates, soluble in water	80 parts.

2673. Mixed Bird Seed.

Hemp	5 parts.
Canary	4 parts.
Millet	1 part.
Maw	1 part.

2674. "Douglass Mixture" for Moulting Birds.

Dissolve 1 ounce of iron sulphate in 1 quart of water, add 1 dram of dilute sulphuric acid, and put 1 teaspoonful of this mixture in each quart of drinking water. When chickens droop and seem to suffer as the feathers on the head grow, give them meat, minced fine, and canary seed once a day.

2675. German Paste.

Cornmeal	8 ounces.
Sweet almonds, blanched...	4 ounces.
Fresh butter.....	1 ounce.
Sugar, powdered.....	1 ounce.
Saffron	5 grains.
Eggs	1 or 2.

Pass the egg through a fine grater, and add to the other ingredients. Beat to a smooth paste with cold water, and granulate the mass by passing through a coarse grater, then expose the product to the air in a warm place until quite hard and dry.

2676. German Paste.

Blanched sweet almonds...	1 pound.
Pea meal.....	2 pounds.
Butter	3 ounces.
Saffron, a few grains.	
Honey, quantity sufficient.	

Mix. Form the whole into a paste and granulate it by pressing it through a colander. Some add the yolks of two eggs.

2677. German Paste.

Take 4 fresh eggs, boiled very hard, $\frac{1}{4}$ pound white pease meal, and about a tablespoonful of good salad oil—if the least rancid it will not do. The eggs must be grated very fine and mixed with meal and olive oil, and the whole then be pressed through a tin colander, to form it into grains like small shot; it should next be put into a frying pan, set over a gentle fire, and gradually stirred with a broad knife till it be partially wasted and dried, the test of which will be its yellowish brown color. All insect eating birds may be kept upon this food throughout the year, except when they appear drooping and unwell, or at moulting time, when a few meal worms may be given to them twice or three times a day.

2678. Bird Food.

Pea meal.....	1 pound.
Coarse sugar.....	$\frac{1}{2}$ pound.
Fresh butter.....	2 ounces.
Yolks of eggs.....	2.

Mix these well together and brown gently in a frying pan. When cold mix well with:

Poppy seed.....	2 ounces.
Bruised hemp seed (separated from the husks)..	2 pounds.

2679. Mocking Bird Food.

Hemp seed, crushed.....	3 pounds.
Crackers, soda.....	1 pound.
Corn meal.....	1 pound.
Cayenne pepper, powdered.	6 drams.
Lard	1 ounce.

2680. Mocking Bird Food.

Corn meal.....	2 parts.
Pea meal.....	2 parts.
Moss meal.....	1 part.

Add a little lard, but not enough to make it too greasy, and sweeten with a little molasses. Fry the mixture in a frying-pan for one-half hour, stirring constantly and taking care not to let burn. The moss meal in this formula is prepared by drying and grinding the German moss seed.

2681. Mocking Bird Food.

Ox heart, dried.....	2 parts.
Poppy seed cake.....	2 parts.
Bread, dried.....	2 parts.
Ant's eggs, dried.....	2 parts.
Hemp seed.....	1 part.
Corn meal.....	1 part.
Lard.....	1 part.

Grind to a coarse powder and mix with the lard, previously melted. When given to the birds, mix with an equal quantity of grated carrots.

2682. Mocking Bird Food.

Hemp seed..... 2 parts.
 Toasted wheat bread..... 2 parts.
 Maw seed..... 1 part.
 Ox heart..... 1 part.

Boil the ox heart well in water, cut small and place it on a pan in an oven, where it must be allowed to become perfectly dry and crisp. All the ingredients must then be thoroughly mixed and ground in a mill to coarse powder.

2683. Chicken Cholera.

Sulphate of iron..... 1 part.
 Red pepper pods..... 1 part.
 Black pepper..... 2 parts.
 Phosphate of lime..... 8 parts.
 Ferugreek 4 parts.

Powder, and add 4 parts of white sand, and mix the whole thoroughly. To be mixed with the food of fowls, a level tablespoonful being sufficient for each dozen chickens.

2684. Chicken Cholera.

Sulphuric acid..... 1 fl. ounce.
 Sulphate of iron..... 16 ounces.
 Water (to dissolve)..... 1 gallon.

Mix. Add 1 ounce of this mixture to a pint of water, and supply in place of water to drink. Or, mix with meal or other food.

2685. Chicken Cholera.

A remedy promulgated by the Department of Agriculture is alum alone, giving 3 or 4 teaspoonfuls of alum water daily, and mix with the feed (corn meal) strong alum water. This is said to cure the very worst cases.

Another remedy is to feed raw onions, chopped fine, mixed with other food, about twice a week.

2686. Chicken Cholera.

The following remedies and treatment have been proposed: Take of crystals of carbolic acid, 2 ounces; hyposulphite of soda, 2 ounces; dissolve in 1 gallon of clean water; add of this solution 1 or 2 ounces to the gallon of water that the fowls drink, or mix it in the same proportion in a mash made of ground grain or other food. This not only relieves when sick, but is an excellent preventive. Chicken cholera can only be introduced by direct importation of the virus, either with fowls or by birds, rabbits or insects carrying it from neighboring farms. The virus is never carried through the air. When more than one fowl dies within a short period, cholera should be suspected. Separate the fowls as much as possible, and give restricted quarters where they may be observed, and where disinfectants may be freely used. If the peculiar diarrhoea sets in, kill the sick ones and change the remainder to fresh ground. The infected excrements should be carefully scraped up and burned, and the enclosure thoroughly disinfected with a $\frac{1}{2}$ per cent solution of sulphuric acid, or a 1 per cent solution of carbolic acid, which may be applied with a common watering pot. Burn the dead birds. The germs of the disease are taken into the system only by the mouth, and, therefore, the watering-troughs and feeding-places must be kept perfectly sweet by frequent disinfection with one of the solutions mentioned. Three weeks after the last case of sickness, the fowls may again be placed together in a disinfected run. Keep them, however, under observation for two or three months before allowing them again to roam over the old places.



PART V.

Family Medicines, Remedies for Minor Ailments, etc.

COUGH MIXTURES.

2687. Cough Mixture.

Ammonium chloride..... 1 dram.
Spirits ether compound.... 6 fl. drams.
Syrup wild cherry..... 2 fl. ounces.
Water to make..... 8 fl. ounces.
Dose, teaspoonful.

2688. Cough Mixture.

Syrup squills..... 2 drams.
Wine ipecac..... 1 dram.
Tincture camphor com-
pound 1 dram.
Syrup 4 drams.
Water 3 ounces.
Dose, 1 to 2 teaspoonfuls, according to
age. A good cough mixture for children.

2689. Cough Mixture.

Morphine acetate..... 2 grains.
Syrup wild cherry..... 1 ounce.
Copaiba 3 drams.
Tincture lobelia..... 5 drams.
Syrup tolu..... 2 ounces.
Oil sassafras..... 5 drops.
Take a teaspoonful when the cough is
troublesome. Shake the bottle before
using.

2690. Cough Mixture.

Chloride ammonium..... 2 drams.
Chloroform 1 dram.
Brown mixture..... 3 ounces.
Mix. Shake well and take a teaspoonful
three or four times a day.

2691. Cough Mixture.

Syrup wild cherry..... 6 drams.
Camphor water..... 1 ounce.
Syrup ipecac..... 2 drams.
Mix. A teaspoonful every two or three
hours.

2692. Cough Mixture.

Spirit nitrous ether..... 2 drams.
Wine ipecac..... ½ ounce.
Deodorized tincture opium. 1 dram.
Syrup tolu..... 2 ounces.
A teaspoonful two or three times daily.

2693. Cough Mixture.

Wild cherry bark..... 240 grains.
Senega 240 grains.
Ipecac 120 grains.
Extract conium..... 15 grains.
Tincture cardamom com-
pound 1 ounce.
Spirits juniper compound. 1 ounce.
Water enough to make.. 10 ounces.

Percolate the solid ingredients with suf-
ficient water to make 8 fluid ounces; then
add the other ingredients. Two teaspoon-
fuls in water constitute the usual dose to
relieve cough.

2694. Cough Mixture.

Wine of antimony..... ½ ounce.
Vinegar of squills..... ½ ounce.
Laudanum 3 drams.
Oil of wintergreen..... 20 drops.
Sugar-house molasses..... 8 ounces.

2695. Cough Mixture.

Sulphuric ether 3 fl. drams.
Tincture of hyoscyamus.. 1 fl. ounce.
Syrup of wild cherry..... 1 fl. ounce.
Syrup of tolu..... 1 fl. ounce.
Water to make..... 4 fl. ounces.

2696. Cough Mixture.

Tincture of aconite..... 30 drops.
Tincture of belladonna.... 30 drops.
Water 2 ounces.
Mix. A teaspoonful every two or three
hours.

2697. Cough Mixture.

Syrup wild cherry..... 4 ounces.
Syrup ipecac..... 1¼ ounces.
Compound tincture cin-
chona 2¼ ounces.
Deodorized laudanum..... 3 drams.
Mix. A teaspoonful as desired.

2698. Cough Mixture.

Syrup tolu,
Syrup wild cherry,
Tincture hyoscyamus,
Compound spirit ether,
Water, of each, equal parts.
Dose, a teaspoonful.

2699. Cough Mixture.

Salicylic acid..... 60 grains.
 Solution acetate of ammonia 1½ ounces.
 Syrup 6 drams.
 Mlx. Take a teaspoonful every three or four hours.

2700. General Cough Mixture.

Syrup of squill..... 1 ounce.
 Syrup of ipecac..... 1 ounce.
 Syrup of tolu..... 1 ounce.
 Sweet spirits of nitre..... 1 ounce.
 Powdered extract of licorice 30 grains.
 Mix. Shake well and take a teaspoonful every few hours, as required.

2701. Cough Mixture for Children.

Ammonium bromide..... 3 drams.
 Chloroform water..... 4 ounces.
 Wine ipecac..... 1 ounce.
 Syrup wild cherry..... 2 ounces.
 Syrup tolu..... 2 ounces.
 Syrup blackberry..... 4 ounces.
 Simple syrup, to make..... 16 ounces.
 If desired more powerfully sedative add 20 minims tincture henbane for each ounce of the mixture.

2702. Cough Mixture for Children.

Compound syrup glycyrrhiza 2 ounces.
 Syrup wild cherry..... 1 ounce.
 Syrup tolu..... 1 ounce.
 One-half teaspoonful three or four times a day for infants, larger doses for children.

2703. Cough Mixture for Children.

Deodorized tincture opium ½ dram.
 Wine antimony..... ½ dram.
 Fluid extract valerian..... 2 drams.
 Simple syrup..... 2 drams.
 Water 1½ ounces.
 A teaspoonful every hour or two until cough is controlled.

2704. Expectorant Cough Mixture.

Tincture bloodroot..... 1 dram.
 Syrup ipecac..... ½ ounce.
 Tincture lobelia..... 1 dram.
 Glycerine ½ ounce.
 A teaspoonful every two or three hours.

2705. Compound Lobelia Cough Mixture.

Iodide potassium..... 2 drams.
 Carbonate ammonium..... 1 dram.
 Ethereal tincture lobelia.... 4 drams.
 Spirit chloroform..... 4 drams.
 Ipecacuanha wine..... 1 dram.
 Infusion senega up to..... 6 ounces.
 Dissolve and mix. A tablespoonful in a wine-glassful of water every 4 hours. Useful in bronchitic asthma.

2706. Brown Mixture (Improved).

Extract licorice, purified... 1 ounce.
 Dextrin syrup (glucose).... 10 ounces.
 Ammonium chloride..... 1 ounce.
 Tincture opium, camphorated..... 1 ounce.
 Wine antimony..... ½ ounce.
 Spirit nitrous ether..... ¼ ounce.
 Water q. s. to make..... 16 ounces.
 Mix. Dose, 1 to 4 teaspoonfuls.

2707. Bronchitis Mixture.

Carbonate of ammonium. 16 grains.
 Syrup of tolu..... ½ fl. ounce.
 Tincture of squill..... 40 minims.
 Compound tincture of cinchona 2 fl. drams.
 Spirit of chloroform..... 4 minims.
 Rose water..... 2 fl. ounces.
 Dose, 1 fluid dram every four hours.

2708. Bronchitis Mixture.

Wine ipecac..... 1 dram.
 Tincture squills..... 2 drams.
 Syrup tolu..... 5 drams.
 Water..... 1 ounce.
 A teaspoonful every three or four hours.

2709. Lobelia Bronchitis Mixture.

Potassium bicarbonate..... 5 grains.
 Tincture lobelia, ether.... 15 minims.
 Spirit chloroform..... 10 minims.
 Distilled water, enough to make 1 ounce.
 For a dose.

COUGH SYRUPS.

2710. Cough Syrup.

Ammonium muriate..... 1 dram.
 Morphine muriate..... 2 grains.
 Water, enough to dissolve.
 Then add:
 Fluid extract ipecac..... ½ dram.
 Compound syrup squills.. 2 drams.
 Syrup squills..... ½ ounce.
 Syrup wild cherry..... 1½ ounces.
 Syrup licorice..... 1½ ounces.
 Spirit chloroform..... 1 dram.
 A teaspoonful once in three or four hours, as needed. Take last dose at bed time.

2711. Cough Syrup.

Tincture cohosh..... 1 ounce.
 Tincture bloodroot..... 1 ounce.
 Paregoric..... 1 ounce.
 Syrup of ipecac..... 1 ounce.
 Syrup of squill..... 1 ounce.
 Syrup of tolu..... 1 ounce.
 Mix; take one or two teaspoonfuls, as required.

2712. Exeelsior Cough Syrup.

Morphine sulphate..... 8 grains.
 Tartar emetic..... 4 grains.
 Fluid extract ipecac..... 90 minims.
 Tincture bloodroot..... 1 ounce.
 Water 6 ounces.
 Syrup enough to make..... 2 pints.

Heat the water, add the morphine sulphate and tartar emetic; stir until dissolved and add the syrup cold; shake, and to this mixture add the fluid extract ipecac, and the tincture of bloodroot. Dose for adults, 1 teaspoonful three times daily and after each severe fit of coughing; for children, in proportion to age.

2713. Expectorant Cough Syrup.

Tartar emetic..... 1 grain
 Ammonium chloride..... 2 drams.
 Chloral hydrate..... 1 dram.
 Glycerine 2 ounces.
 Syrup wild cherry..... 4 ounces.
 Two teaspoonfuls every hour or two.

2714. Lemon Juice Cough Syrup.

Citrate potassium..... 1 dram.
 Lemon juice..... 2 drams.
 Syrup ipecac..... ½ ounce.
 Simple syrup to make..... 4 ounces.

2715. Syrup for Consumptives.

Calcium phosphate..... 60 grains.
 Distilled water..... 2 drams.
 Hydrochloric acid..... 75 to 95 minims.

Mix the phosphate with the water and add sufficient water to dissolve it. Then in the proper manner:

Balsam of Peru..... 30 minims.
 Gum arabic..... 30 grains.
 Creosote..... 15 minims.
 Syrup, to..... 3 ounces.

The maximum dose of this syrup is a tablespoonful three times a day, but it is advisable to begin on less, say a teaspoonful.

2716. Consumption Cure.

Syrup of morphia..... 4 ounces.
 Chloroform..... ½ fl. ounce.
 Glycerine 3½ fl. ounces.
 Hydrocyanic acid, dilute 1 dram.

Mix the chloroform with the glycerine; add the other ingredients and mix. Dose, a teaspoonful.

2717. Syrup Honey, Horehound and Tar.

Oil tar 2 drams.
 Fluid extract horehound... 4 drams.
 Oil anise 5 drops.
 Jamaica rum 8 ounces.
 Honey, enough to make.... 16 ounces.

Dose: A half to one teaspoonful.

2718. Tar Horehound Cough Syrup.

Horehound 2 drams.
 Irish moss 1½ ounces.
 Ammonium chloride..... 1½ ounces.
 Boiling water..... 4 pints.
 Let stand for 12 hours, strain and add
 Oil tar..... 2 drams.
 Dissolved in chloroform.. ½ ounce.
 Fluid extract senna..... 2 ounces.
 Syrup squills compound... 1 pint.

2719. Syrup Honey and Tolu.

Tincture tolu..... 1 dram.
 Tincture opium camphorated 4 drams.
 Syrup squill..... 4 drams.
 Honey, enough to make..... 4 ounces.
 Dose: One teaspoonful.

2720. Syrup of Licorice Root.

Licorice root, in moderately coarse powder 4 troy ounces.
 Diluted alcohol, sufficient quantity.

Sugar 12 troy ounces.

Moisten and pack in a conical percolator; macerate for 12 hours, percolate to exhaustion. Place the tincture over a warm bath until reduced to 10 fluid ounces, filter, and then add the sugar; lastly sufficient distilled water to make 16 fluid ounces of finished syrup.

2721. Syrup of Lobelia, Thompsonian.

Lobelia seed or herb..... ½ pound.
 Water 1 gallon.
 Vinegar ½ pint.
 Boil half an hour, strain, add
 Sugar 8 pounds.
 When cold, add
 Tincture of lobelia..... 2 pounds.

2722. Syrup White Pine Compound.

White pine bark in coarse powder..... 4 troy ounces.
 Wild cherry bark in coarse powder..... 4 troy ounces.
 Spikenard 256 grains.
 Balm gilead buds..... 256 grains.
 Blood root 192 grains.
 Sassafras bark 128 grains.
 Morphine sulphate 12 grains.
 Chloroform 256 grains.
 Alcohol 8 fl. ounces.
 Water 6 fl. ounces.
 Glycerine 2 fl. ounces.
 Syrup 3 pints.

Reduce the drugs to No. 30 powder and macerate with the mixture of alcohol and water. When thoroughly moistened allow percolation to proceed and collect the first 14 ounces, which set aside. Continue the percolation until marc is exhausted.

Evaporate the final percolate to 2 ounces and mix with the reserved portion. Filter, add the chloroform and morphine and sufficient syrup to bring the total bulk up to 4 pints.

2723. Syrupus Pinus Compositus.

White gum turpentine.... 2 drams.
Fluid extract of ipecac... 4 fl. drams.
Chloroform 1 fl. dram.
Sugar 14 ounces.
Water 6 fl. ounces.
Alcohol 3 fl. ounces.
Magnesium carbonate, sufficient.

Dissolve the gum turpentine in the alcohol, triturate with the magnesium carbonate and fluid extract of ipecac, add the sugar and morphine dissolved in the water and filter.

2724. Compound Syrup of Wild Cherry.

Fluid extract of wild
cherry 2½ fl. ounces.
Fluid extract of ipecac... ½ fl. ounce.
Fluid extract of blood
root ½ fl. ounce.
Sulphate of morphine.... 8 grains.
Tartar emetic..... 2 grains.
Simple syrup, sufficient
to make..... 1 pint.

This syrup should be dispensed with a "shake" label attached and with caution as to the dose, on account of the large proportion of morphine.

2725. Syrup of Tar and Wild Cherry.

Tar 6 parts.
Wild cherry in No. 20 powder 12 parts.
Sugar 60 parts.
Glycerine 10 parts.
Boiling water..... 60 parts.
Cold water, a sufficient quantity.

Upon the tar contained in a suitable vessel pour 12 parts of cold water and stir the mixture frequently during 24 hours; then pour off the water and throw it away. Pour the boiling water upon the residue and stir briskly for 15 minutes, then set aside for 36 hours, stirring occasionally. Decant the clear solution and with it thoroughly moisten the wild cherry. Macerate for 24 hours in a closed vessel, then pack it firmly in a cylindrical glass percolator, and gradually pour upon it first the solution of tar and then water until 30 parts of percolate are obtained. Dissolve the sugar in percolate by agitation without heat, add the glycerine and strain.

2726. Syrup Wild Cherry, Horehound and Tar.

Syrup of tolu..... 4 ounces.
Syrup of wild cherry..... 2 ounces.
Fluid extract of horehound.1 ounce.
Mix them. Dose, a teaspoonful.

COUGH BALSAMS.

2727. Cough Balsam.

Syrup senega 1½ ounces.
Tincture conium 1 ounce.
Elixir fir compound,
enough to make..... 10 ounces.

2728. Cough Balsam.

Cherry laurel water..... 1½ ounces.
Solution acetate morphine 1½ ounces.
Dilute sulphuric acid.... 1½ ounces.
Tincture saffron..... 1 ounce.
Orange flower water..... 3 ounces.
Glycerine 6 ounces.
Decoction Iceland moss.. 14 ounces.
Simple syrup 16 ounces.

Dose: One teaspoonful.

2729. Cough Balsam.

Cherry laurel water..... 1½ ounces.
Syrup wild cherry..... 3 ounces.
Solution acetate morphine ½ ounce.
Dilute sulphuric acid.... 2 ounces.
Rose water 4 ounces.
Syrup poppies 40 ounces.

Dose: One teaspoonful, undiluted, when the cough is troublesome.

2730. Balsam of Aniseed.

Oil anise..... 1 dram.
Oil cinnamon 10 minims.
Oil coriander 5 minims.
Compound tincture benzoin 1 ounce.
Compound tincture camphor 3 ounces.
Vinegar of squills..... 6 ounces.
Syrup 5 ounces.
Mucilage tragacanth
enough to make..... 20 ounces.

Dissolve the oils in the tinctures and add the mucilage; then mix in the rest of the ingredients.

2731. Tripp's Balsam of Anise.

Oil of anise..... 3 ounces.
Tincture of tolu..... 12 ounces.
Canada balsam 6 ounces.
Oil of sweet almonds.... 4½ ounces.

Set the mixture in the sun for four or five days, and shake it three times a day. This is highly recommended for coughs. Twelve or fifteen drops may be taken on sugar three times a day. Shake the vial well before dropping.

2732. Balsam of Horehound.

Extracts of horehound and licorice, of each 2 ounces; hot water, ½ pint; dissolve, and when cold, add of paregoric, ¾ pint; oxymel of squills, 6 ounces; tincture of benzoin, 2 ounces; honey, 10 ounces; and, after thorough admixture, strain through flannel.

2733. Golden Honey Balsam.

Honey	8 ounces.
Water	20 ounces.
Wine ipecac.....	4 drams.
Tincture belladonna.....	2 drams.
Oil aniseed.....	30 drops.
Lump sugar.....	½ ounce.

Rub the sugar and oil of aniseed together and add:

Tincture saffron..... 2 drams.

To make the tincture of saffron, put 5 grains saffron to 1 ounce of spirits wine.

2734. Iceland Moss Cough Balsam.

Solution acetate of morphine	12 drams.
Dilute sulphuric acid.....	12 drams.
Cherry laurel water.....	12 drams.
Triple orange flower water.	3 ounces.
Simple syrup	16 ounces.
Glycerine	6 ounces.
Tincture of saffron.....	1 ounce.
Decoction of Iceland moss..	14 ounces.

Mix. One teaspoonful, undiluted, for a dose.

2735. Balsam Peru Injection (for Tuberculosis).

Acacia, powdered	30 grains.
Balsam Peru	1 fl. dram.
Solution sodium chloride.	45 minims.
Water, distilled, q. s. to make	5 fl. drams.

The gum is mixed with an equal amount of water, and to this is added the balsam Peru, drop by drop, under constant trituration. After the emulsion has been completely effected, 2 fluid drams of distilled water are added, then the solution of sodium chloride, and finally distilled water sufficient to the measure. The emulsion is then neutralized with a solution of sodium bicarbonate, and in quantities of from 1 to 2 drams placed in sterilized test-tubes, stoppered with cotton and subjected to the action of steam for one hour until completely sterilized.

2736. Compound Balsam of Squills.

Oil anise	1 dram.
Oil cinnamon	10 minims.
Oil coriander	5 minims.
Compound tincture benzoin	1 ounce.
Compound tincture camphor	3 drams.
Syrup	5 ounces.
Honey of squills	6 ounces.
Mucilage tragacanth enough to make	20 ounces.

Mix the oils with the tinctures and gradually add, under constant agitation, to 5 ounces of mucilage of tragacanth. When completely emulsified, add the syrup and honey of squills and enough mucilage to make 20 ounces.

COUGH ELIXIRS.**2737. Cough Elixir.**

Glycerine	12 ounces.
Syrup raspberry	2 ounces.
Chloric ether (1 in 10).....	26 drams.
Extract carmine	2 drams.
Muriate of morphine	12 grains.
Sulphuric acid, diluted....	20 drams.
Hydrocyanic acid, diluted	240 minims.
Water, q. s. to.....	30 fl. ounces.

2738. Cough Elixir.

Tincture of blood root.....	2 drams.
Essence of bitter almonds (1 in 20).....	1 dram.
Tincture of wild cherry....	1 ounce.
Alcohol, diluted	1 ounce.
Glycerine	1 ounce.

Mix.

Acetate of morphia	3 grains.
Tartar emetic	2 grains.
Water	½ ounce.

Dissolve by the aid of 5 drops of acetic acid, add to the preceding, and make up to 8 ounces with syrup.

2739. Cough Elixir.

Extracts of blessed thistle and dulcamara, of each 1 dram; cherry laurel water, 1 fluid dram; fennel water, 1 fluid ounce. Dose, 1 to 2 teaspoonfuls three or four times a day. It is a most useful remedy in coughs occurring in nervous, hysterical, or irritable patients.

2740. Tonic Cough Elixir.

Simple syrup	20 ounces.
Tincture wild cherry	18 ounces.
Solution morphine, B. P..	4 ounces.
Wine of ipecac	4 ounces.
Potassium chlorate	3 ounces.
Spirit chloroform	6 ounces.
Water enough to make...	144 ounces.
Macerate, filter when bright.	

2741. Wild Cherry Cough Elixir.

Morphine acetate	3 grains.
Tincture bloodroot	2 drams.
Wine of antimony	3 drams.
Wine of ipecac	3 drams.
Fluid extract wild cherry.	3 ounces.
Oil bitter almonds	3 minims.
Syrup enough to make....	8 ounces.

Dose for an adult, 1 to 2 teaspoonfuls.

2742. Codeine Jelly for Coughs.

Gelatin	2½ drams.
Distilled water	9 ounces.
Glycerine	4½ ounces.
Simple syrup	2½ ounces.

Dissolve the gelatin in the water, glycerine and syrup. To every dram by weight add codeine 1-16 grain, dissolved in dilute phosphoric acid, 4 minims.

2743. Essence of Coltsfoot.

Balsam of tolu, 1 ounce; rectified spirit and compound tincture of benzoin, of each 3 ounces; dissolve, and in a few days decant the clear portion.

2744. Essence of Coltsfoot.

Equal parts of balsam of tolu and compound tincture of benzoin, with double the quantity of rectified spirit.

2745. Essence of Coltsfoot.

Tincture of tolu, 5 fluid ounces; compound tincture of benzoin, 3 fluid ounces; powdered sugar (quite dry), 1 ounce; hay saffron, 1 dram. Digest a week, with frequent agitation.

2746. Essence of Linseed.

Chlorodyne 45 minims.
Oil of anise..... 4 minims.
Tincture tolu..... ½ ounce.
Tincture senega..... ½ ounce.
Vinegar squills..... 1½ ounces.
Infusion linseed, enough
to make..... 3 ounces.

Add the oil of anise in the tincture of tolu, to the vinegar of squills and mix the other ingredients by shaking. Dose, 1 to 2 drams.

2747. Infusion of Flaxseed.

Linseed 1 ounce.
Licorice root..... ½ ounce.
Boiling water..... 2 pints.

Macerate for 2 or 3 hours near the fire, in a covered vessel; strain, and add lemon juice sufficient to make it agreeable. It may be given as a common drink in catarrh.

2748. Application for Quinsy.

Tannin 15 grains.
Carbolic acid..... 30 minims.
Tincture iodine..... 3 drops.
Glycerine 5 drams.
Water..... 2½ ounces.

Apply three times a day.

TOOTHACHE REMEDIES.

2749. Toothache Drops.

Oil of peppermint..... 3 drams.
Rhogolin..... 3 drams.
Chloroform 3 drams.
Camphor 2 drams.

2750. Toothache Drops.

Couline, pure..... 1 drop.
Oil of cloves..... 4 drops.
Oil of cinnamon..... 4 drops.
Alcohol..... 2 fl. drams.

Put 1 drop on a pledget of absorbent cotton and apply.

2751. Toothache Drops.

Tincture opium..... 1 ounce.
Tincture catechu..... 1 ounce.
Tincture myrrh and capsicum 1 ounce.
Sulphuric ether..... 1 ounce.
Oil cloves..... ½ ounce.
Fluid extract aconite..... ½ ounce.
Fluid extract cannabis indica..... ½ ounce.
Creosote 2 drams.

2752. Toothache Drops.

Pure conine..... 2 drops.
Oil cinnamon..... 8 drops.
Alcohol 4 drams.

2753. Toothache Drops.

Oil cloves..... 30 minims.
Sulphuric ether..... 6 drams.
Tincture opium..... 1 dram.
Oil lavender 1 dram.
Chloroform..... 5 drams.
Alcohol 1 ounce.

2754. Toothache Drops.

Oil cloves 2 fl. ounces.
Oil peppermint 4 fl. drams.
Creosote 1 fl. ounce.
Tincture aconite ½ fl. ounce.
Chloroform, enough to
make 8 fl. ounces.

2755. Toothache Drops.

Creosote 5.0
Alcohol 4.0
Tincture cochineal..... 1.0
Oil peppermint..... 3 drops.

2756. Toothache Drops.

Oil cajuput 1 gram.
Oil cloves 1 gram.
Chloroform 2 grams.

2757. Toothache Drops.

Camphor 2.0
Spirits peppermint..... 1.0

2758. Toothache Drops.

Tincture cannabis indica..... 2.0
Oil of cloves..... 2.0
Chloroform 2.0

2759. Toothache Drops.

Tincture opium (crocata)..... 2.0
Oil peppermint..... 2.0
Spirits ether..... 2.0

2760. Toothache Drops.

Aconite liniment..... 3 drams.
Chloroform 3 drams.
Tincture capsicum..... 1 dram.
Tincture pellitory..... ½ dram.
Oil cloves..... ½ dram.
Powdered camphor..... ½ dram.

A few drops to be placed on a pellet of cotton, and applied to the cavity.

2761. Toothache Drops.

Creosote 2 drops.
 Essence peppermint..... 2 drops.
 Camphorated oil..... 2 drops.
 Essence violets 5 drops.
 Cocaine $\frac{1}{4}$ grain.
 Chloroform, quantity sufficient.

2762. Toothache Drops.

Chloroform 1 ounce.
 Oil cloves..... 2 drams.
 Oil peppermint..... $\frac{1}{2}$ dram.
 Oil spearmint..... 2 drops.
 Oil sandalwood..... 15 drops.
 Oil cajuput..... 4 drops.
 Tincture cassia..... $1\frac{1}{2}$ ounces.

Mix these, and add to 1 ounce of a tincture containing 20 grains of catechu in 1 ounce absolute alcohol.

2763. Toothache Drops.

Alcohol, 4 drams; camphor, 2 drams; menthol crystals, 1 dram; oil of eucalyptus, 30 drops.

2764. Toothache Tincture Anodyne.

Mastic 4 drams.
 Tannin 2 drams.
 Camphor 4 drams.
 Tincture of myrrh..... 4 drams.
 Chloroform 4 drams.
 Tincture opium..... 4 drams.
 Alcohol 3 ounces.

Macerate for a week and filter.

This makes a very good toothache anodyne and temporary stopping. Dry the hollow tooth by stuffing the hole with cotton wool. Remove the cotton, and immediately place in the hole a fresh piece of the cotton wool, saturated with the tincture.

2765. Toothache Tincture.

Creosote 2 drams.
 Chloroform 2 drams.
 Sydenham's laudanum..... 4 drams.
 Tincture benzoin..... 1 ounce.

2766. Toothache Tincture.

Pellitory 1 ounce.
 Ginger 1 ounce.
 Cloves 1 ounce.
 Camphor 1 ounce.
 Tincture opium..... 4 ounces.
 Alcohol 16 ounces.

Macerate for 8 days and strain.

2767. Toothache Tincture.

Opium 2 ounces.
 Mastic 1 ounce.
 Balsam tolu..... 1 dram.
 Camphor 1 ounce.
 Oil of cloves..... 1 dram.
 Alcohol 16 fl. ounces.
 Oil bitter almonds..... 8 drops.

2768. Toothache Tincture.

Bruised pellitory..... $\frac{1}{2}$ ounce.
 Camphor 3 drams.
 Opium 1 dram.
 Oil of cloves..... $\frac{1}{2}$ dram.
 Alcohol 6 ounces.
 Digest for 10 days and strain.

2769. Odontalgic Mastic.

Mastic..... 20.0
 Sandarac 20.0
 Dragon's blood..... 2.0
 Opium..... 0.5
 Pulverize and mix with
 Oil cinnamon..... 1.0
 Oil cloves..... 1.0
 Alcohol, quantity sufficient.

Make into soft mass. Insert a little into the cavity of the tooth on cotton wool.

2770. Toothache Paste.

For toothache and for allaying sensitiveness of teeth before filling, 1 part sodium-soziodol and two parts potassium-soziodol made into a paste with glycerine is put into the cavity. The soluble sodium salt gradually goes through the points of the roots, while the potassium salt, which is almost insoluble, remains behind, thereby in nearly every case preventing periostitis.

2771. Toothache Collodion.

Morphine hydrochlorate... .05 grams.
 Oil peppermint..... 4 drops.
 Carbolic acid..... 20 drops.
 Collodion, enough to make. 4 grams.

Moisten with this a pledget of cotton and place in the cavity of the tooth.

2772. Toothache Wax.

White wax..... 30 parts.
 Venice turpentine..... 12 parts.
 Mastic, powdered..... 5 parts.
 Opium, powdered..... 3 parts.
 Chloral hydrate..... $2\frac{1}{2}$ parts.

2773. Toothache Wax.

Yellow wax..... 60.
 Venice turpentine..... 10.0
 Pulverized dragon's blood 10.0
 Pulverized mastic..... 10.0
 Pulverized opium..... 2.5
 Salicylic acid..... 5.0
 Oil of cloves..... 5.0
 Oil cajuput..... 1.0

With a gentle heat, mix into a mass. Stir while cooling and roll out into sticks weighing 2.5 grams. Wrap in paraffined paper and preserve in stoppered bottles.

2774. Toothache Gum.

Paraffin 94 grams.
 Burgundy pitch..... 800 grams.
 Oil cloves..... $\frac{1}{2}$ fl. dram.
 Creosote $\frac{1}{2}$ fl. dram.

Melt the first two ingredients, and when

nearly cool add the rest, stirring well. May be made into small pills or sent out in form of small cones or cylinders.

2775. Toothache Pellets.

Cocaine hydrochlorate..... 16 grains.
Powdered opium..... 64 grains.
Menthol..... 16 grains.
Althaea, powdered..... 48 grains.
Mucilage of acacia..... 9 grains.

Make into $\frac{1}{2}$ grain pills and keep in well-stoppered vials. Insert 1 pill into the hollow tooth.

2776. Toothache Remedy.

Melt white wax or spermaceti, 2 parts, and when melted add carbolic acid crystals, 2 parts; stir well till dissolved. While still liquid immerse thin layers of carbolized absorbent cotton wool and allow them to dry. When required for use, a small piece may be snipped off and slightly warmed, when it can be inserted into the hollow tooth, where it will solidify.

2777. Teeth, Exposed Nerves.

Apply a mixture of 8 grains of carbolic acid (crystals), 620 grains iodoform, 620 grains powdered kaolin, 10 drops oil of menthol.

2778. Tooth Cement.

Pulverized mastic..... 10.0
Pulverized sandarac..... 2.5
Ether 25.0

Set aside until solution is effected; then decant.

2779. Tooth Cement, Bernoth's.

Pulverized mastic..... 5.0
Absolute alcohol..... 1.0
Ether 2.5
Camphor 0.2
Oil cloves..... 0.1
Powdered alum, quantity sufficient.

Thoroughly knead into a soft mass.

2780. Tooth Cement Odontalgic.

Tannic acid 30.0.
Powdered catechu..... 30.0.
Oil cloves 5.0.
Powdered opium 10.0.
Powdered cloves 10.0.

Mix thoroughly, and add to 250 parts gutta-percha softened by heating upon the water-bath.

2781. Tooth Cement, Souberan's.

Powdered mastic and
sandarac, of each 4 drams.
Dragon's blood 2 drams.
Opium 15 grains.

Mix with sufficient alcohol to form a stiff paste. A solution of mastic, or of mastic and sandarac, in half the quantity of alcohol, is also used, applied with a little cotton or lint.

2782. Tooth Cement.

Sandarac 12 parts.
Mastic 2 parts.
Amber, in powder 1 part.
Ether 6 parts.

Applied with cotton.

2783. Tooth Cement.

Put into a quart bottle 2 ounces of mastic and 3 ounces of absolute alcohol; apply a gentle heat by a water-bath. When dissolved add 9 ounces of dry balsam of tolu, and again heat gently. A piece of cotton dipped in this viscid solution becomes hard when introduced into the teeth, previously dried and cleansed as above.

2784. Tooth Cement, Ostermaier's.

Mix 12 parts of dry phosphoric acid with 13 of pure and pulverized quick lime. It becomes moist in mixing, in which state it is introduced into the cavity of the tooth, where it quickly becomes hard.

2785. Dentists' Amalgam.

Mercury or quicksilver forms amalgams with many of the metals, several of which are used by dentists. The following are samples:

Pure grain tin 2 parts.
Cadmium 1 part.
Beeswax 1 part.

Melt them together in a porcelain crucible at a heat not exceeding 600 degrees F., and cast the alloy so as to form a small ingot, which, when cold, must be reduced to filings. For use, a small quantity of these filings is formed into an amalgam with quicksilver; the excess of the latter is squeezed out through a piece of chamois leather and the amalgam at once applied to the teeth.

2786. Dentists' Amalgam.

Gold 1 part.
Silver 3 parts.
Tin 2 parts.

First melt the gold and silver in a crucible, and at the moment of fusion add the tin. When cold it is pulverized. Equal quantities of the powder and mercury are kneaded together in the palm of the hand to form a paste for filling teeth.

2787. Dental Caustic.

Arsenious acid 3 parts.
Morphine sulphate 2 parts.
Creosote, a sufficient quantity to
make a paste.

When used, a minute quantity is introduced into the tooth cavity, which has been previously dried with absorbent cotton, and afterwards a small plug of cotton, moistened with collodion, is placed over it.

2788. Dental Alloys, Composition.

	A.	B.	C.
Tin	91.63	36.78	51.72
Silver	3.82	48.32	34.35
Copper	4.40		
Gold		14.72	
Mercury			8.52

2789. White Dental Stopping.

Zinc oxide	200 parts.
Silica, fine powder	8 parts.
Borax	4 parts.
Glass	5 parts.

Rub together and sift. When required, make into a soft paste with a saturated solution of chloride of zinc.

2790. Mouth Wash Anti-Caries.

Tannin	8 drams.
Potassium iodide	1 dram.
Tincture iodine	5 drams.
Tincture myrrh	5 drams.
Rose water	25 ounces.

A teaspoonful may be mixed with a glass of tepid water for use.

2791. Mouth Wash to Harden the Gums.

Myrrh	1 ounce.
Camphor	1 ounce.
Peruvian bark	1 ounce.

Digest for a few days in one pound of alcohol. Strain through a cloth and filter. Use a teaspoonful daily for rinsing the mouth.

2792. Tooth Extraction, Painless.

Cocaine hydrochlorate....	10 grains.
Morphine sulphate.....	10 grains.
Chloral hydrate.....	10 grains.
Carbolic acid.....	10 grains.
Rose water	10 fl. drams.

Dissolve and inject with a hypodermic syringe into the gums.

2793. Hemorrhage From Tooth Extraction.

Chloroform	1 dram.
Tannic acid.....	30 grains.
Menthol	30 grains.
Tincture krameria.....	1 fl. ounce.
Distilled water	1 pint.

2794. Teething, Painful.

Cocaine is recommended and the following preparation rubbed on the gums several times a day is said to be effective: 1½ grains cocaine hydrochlorate, 2 fluid ounces syrup, 20 drops tincture of conium.

2795. Syrup de Dentition.

Glycerine	1 ounce.
Chloroform	10 drops.
Tincture Spanish saffron	
(1:8)	½ dram.
Honey	½ ounce.

2796. Teething Mixture, Besnier's.

Cocaine hydrochlorate.....	1 gram.
Potassium bromide.....	1 gram.
Glycerine	200 grams.
Water	200 grams.

Apply frequently to the swollen and painful gums with the finger or with a camel's hair pencil.

FAMILY LINIMENTS.**2797. Liniment.**

Soap liniment.....	1½ ounces.
Tincture capsicum.....	½ ounce.
Aqua ammonia.....	½ ounce.
Alcohol	½ ounce.

2798. Liniment.

Oil cloves.....	1 dram.
Oil sassafras.....	2 ounces.
Spirit camphor, enough to	
make	4 ounces.

2799. Liniment.

Tincture opium.....	4 drams.
Tincture aconite.....	4 drams.
Stronger water of ammonia.	4 drams.
Chloroform liniment, enough	
to make.....	8 ounces.

2800. Liniment.

Stronger water ammonia....	4 drams.
Oil cajuput.....	1 dram.
Tincture belladonna.....	1 ounce.
Camphor liniment, enough to	
make	6 ounces

2801. Liniment.

Spirit turpentine.....	1 ounce.
Camphorated oil.....	1 ounce.
Tincture capsicum, ethereal.	1 ounce.
Spirit ammonia.....	1 ounce.

2802. Liniment.

Spirit camphor.....	6 drams.
Spirit ammonia.....	6 drams.
Oil sassafras.....	3 drams.
Chloroform	3 drams.
Oil cloves.....	1½ drams.
Oil turpentine.....	3 drams.
Alcohol, enough to make..	4 ounces.

2803. Liniment, "A. B. C." (Improved).

Liniment aconite.....	5 fl. ounces.
Liniment belladonna....	5 fl. ounces.
Chloroform.....	2½ fl. ounces.
Camphor	4 drams.
Glycerine.....	2 fl. ounces.

2804. Liniment Anodyne.

Tincture belladonna.....	2 drams.
Soap liniment.....	3 ounces.

2805 Liniment Army Medical Wagon.

Water of ammonia, oil turpentine, olive oil, of each equal parts.

2806. Liniment Ammonium Iodide.

Iodine 15 grains.
 Alcohol 8 ounces.
 Camphor..... 2 drams.
 Oil lavender..... 1 dram.
 Oil rosemary..... 1 dram.
 Water ammonia..... 1 ounce.

2807. Liniment Arnica (Glycerole of Arnica).

Arnica flowers, bruised.... 4 ounces.
 Glycerine 1 pound.
 Digest at a moderate temperature on a water-bath, express and strain.

2808. Liniment, Camphorated Ammoniacal.

Soap liniment..... 4 ounces.
 Spirits camphor..... 1 ounce.
 Liquor ammonia..... 2 ounces.

2809. Liniment, Household.

Soap liniment..... 3 ounces.
 Aqua ammonia..... ½ ounce.
 Laudanum ½ ounce.

2810. Liniment, Lime Water and Opium.

Lime water, linseed oil, laudanum, equal parts. An embrocation to allay pain.

2811. Liniment, Magnetic.

Oil turpentine..... 9 ounces.
 Tincture capsicum..... 12 ounces.
 Spirit camphor..... 96 ounces.
 Stronger water of ammonia..... 9 ounces.
 Alcohol 18 ounces.
 Oil sassafras..... ½ ounce.

2812. Liniment, Mustard.

Oil mustard..... 2 drams.
 Chloroform 2 drams.
 Spirits turpentine..... 2 drams.
 Alcohol 1 pint.

2813. Liniment, Pellitory.

Tincture pellitory..... 6 fl. drams.
 Camphorated oil..... ½ fl. dram.
 Water of ammonia..... ½ fl. dram.
 For chilblains and rheumatic pains.

2814. Liniment, Popular.

Tincture capsicum..... 2 parts.
 Tincture myrrh..... 2 parts.
 Tincture opium..... 2 parts.
 Tincture gualac..... 1 part.
 Spirit camphor..... 8 parts.

2815. Liniment Potassium Iodide.

Common salt..... 14 drams.
 Alcohol 8½ ounces.
 Potassium iodide..... 1½ ounces.
 Water 1½ ounces.
 Oil garden lavender..... ½ dram.
 Dissolve the soap in the alcohol by means of a gentle heat, and filter if not perfectly

transparent; then add the oil of lavender and the potassium iodide dissolved in the water; mix, and bottle while warm. The strength of this liniment is about 1 dram to the ounce.

2816. Liniment, Red.

Spirit camphor..... 2 ounces.
 Oil organum..... 2 drams.
 Oil sassafras..... 2 drams.
 Oil turpentine..... ½ ounce.

2817. Liniment, Rheumatic.

Oil wintergreen..... ½ ounce.
 Soap liniment..... 1½ ounces.
 Apply to the painful parts.

2818. Liniment, Rheumatic.

Tincture aconite..... 2 drams.
 Oil turpentine..... 1 ounce.
 Tincture opium..... 1 ounce.
 Soap liniment, enough to make 6 ounces.

2819. Liniment, Sprain.

Oil turpentine..... 2 ounces.
 Acetic acid..... 2 ounces.
 Oil lavender..... 1 dram.
 Yolk of egg..... 1 dram.
 Water enough to make..... 16 ounces.
 Apply 2 or 3 times daily.

2820. Liniment, Sulphur.

Sulphur, precipitated,
 Almond oil,
 Lime water.

Triturate the sulphur with the oil, and add lime water in slight excess; shake it thoroughly together, and dispense it in a wide-mouthed vial.

2821. Liniment, Tannic Acid.

Tannic acid..... 1 ounce.
 Glycerine 1 fl. ounce.
 Make a solution and dilute as desired.

2822. Liniment, Turpentine.

Oil turpentine, 16; camphor, 1; soft soap, 2; dissolve the camphor in the turpentine, then add the soap, and rub till thoroughly mixed.

2823. Liniment, Turpentine.

Resin ointment, 4 ounces; camphor, 4 drams; dissolve by a gentle heat, and stir in oil of turpentine, 5 fluid ounces.

2824. Liniment, Turpentine.

Oil of turpentine, 5 fluid ounces; resin ointment, 8 ounces; mix by a gentle heat.

2825. Liniment, Iodine With Carbolic Acid.

Compound tincture of
 Iodine 3 grams.
 Liquid carbolic acid..... 6 drops.
 Glycerine 30 grams.
 Distilled water..... 150 grams.

2826. Liniment for Scabies.

Arsenious acid..... 1 gram.
 Potassium carbonate..... 15 grains.
 Spirit of soap..... 3 drams.
 Water 3 ounces.

2827. Instantaneous Oil.

Oil wormwood..... 1 dram.
 Oil sassafras..... 2 drams.
 Oil cinnamon..... 2 drams.
 Chloroform ½ ounce.
 Alcohol 4 ounces.

Beneficial for sprains and stiffness of the joints.

2828. Lightning Oil.

Tincture opium..... 1 ounce.
 Oil sassafras..... 1 ounce.
 Tincture colchicum root... 1 ounce.
 Tincture myrrh..... 1 ounce.
 Tincture capsicum..... 1 ounce.
 Tincture valerian..... 1 ounce.
 Sulphuric ether..... 1 ounce.
 Chloroform 1 ounce.
 Water of ammonia..... 2 ounces.
 Castor oil..... 2 ounces.
 Spirits camphor..... 2 ounces.
 Oil cedar..... 2 ounces.
 Alcohol ½ gallon.
 Add red saunders enough to color.

2829. One Minute Lightning Drops.

Oil mustard, volatile..... 45 minims.
 Chloroform 2 drams.
 Oil turpentine..... 30 minims.
 Alcohol 1 fl. ounce.

2830. Liniment, Eagan's.

Menthol 5 parts.
 Dissolved in
 Alcohol 140 parts.
 Add

Glycerine 10 parts.
 Oil of cloves..... 1 part.
 Oil of cinnamon..... 1 part.

For sick headache and neuralgia. Apply with a brush.

2831. Pain Expeller.

Tincture capsicum..... 25 drams.
 Tincture camphor..... 5 drams.
 Water of ammonia..... 10 drams.
 Alcohol 10 drams.
 Soap liniment..... 10 drams.

2832. Essence of Mustard, White-head's.

Oil turpentine..... 4 fl. ounces.
 Camphor 2 drams.
 Oil rosemary..... 2 drops.
 Oil mustard, volatile..... 2 drops.

Infuse together and color with a little tincture of turmeric.

2833. Mustard Sponge.

Mix the mustard in a basin with water until the mass is smooth and of even consistency. Then take the soft mass up with a clean sponge, lay the sponge in the center of a white handkerchief, tie up the corners neatly, and apply the smooth convex surface to the skin. This mustard sponge, warmed again by the fire and slightly moistened, can be employed three or four times, is good for several hours, and saves the trouble of making a new poultice. The sponge can be easily washed in warm water.

FAMILY BITTERS, TONICS, ETC.

2834. Bitters.

Grind to a coarse powder 5 ounces of poly-pody, 6 ounces of calamus root, 8 ounces of orris root, 2¼ ounces of coriander seed, 1 ounce of centaury, 3 ounces of orange peel, 2 ounces of German chamomile flowers; then macerate with 4¾ gallons of 95 per cent. alcohol, and add 5¼ gallons of water and 1 ounce of sugar. Filter, and color brown.

2835. Bitters.

Macerate 2¾ pounds ground dried small orange berries, ¼ pound ground dried orange peel, 2 ounces ground dried calamus root, 2 ounces ground dried pimpinella root, 1 ounce ground or cut hops, for 14 days, with 10 gallons of spirit at 45 per cent.; press, and add 2½ pints of brown sugar syrup. Filter. The color should be dark brown.

2836. Bitters.

Grind to a powder 2 ounces of agaric, 5 ounces of cinnamon, 4 ounces cassia buds, ½ ounce of grains of paradise, 3 ounces of quassia wood, ¾ ounce of cardamom seeds, 3 ounces of gentian root, 3 ounces of orange berries dried, 1½ ounces of orange peel; macerate with 4½ gallons of 95 per cent. alcohol, mixed with 5¾ gallons of water, add 2¼ ounces of acetic ether. Color the liquid brown.

2837. Bitters.

Grind to a coarse powder 4 ounces of cinchona or chiretta bark, 10 ounces of sweet orange peel, 1 ounce of lemon peel, 1 ounce of bitter orange peel, 1 dram of cinnamon, 1 dram of nutmeg, 1 dram of cloves, and 30 cayenne seeds. Infuse for about 10 days in 4 gallons of 65 per cent. alcohol, and then filter off into bottles.

2838. Bitters.

A splendid French bitter is made from 1½ pounds each, red cinchona bark, bitter orange peel and sweet orange peel; 2 ounces of calamus root, 4 ounces of cardamom seeds, 1½ ounces each cinnamon, cloves and nutmeg, 4 ounces of caraway seeds, and 3 pounds of wild cherry bark. Pound all these ingredients to a coarse powder and steep for 15 days in 45 gallons of proof spirit, or 60 gallons of spirit 25 degrees below proof, stirring occasionally. Then rack it off and mix sufficient caramel (burnt sugar) to make it a dark red; add 15 pounds of white sugar dissolved in 15 gallons of water. Let the whole settle, then filter.

2839. Bitters.

Take of plain proof spirit, 90 gallons; of red cinchona bark, 3¼ pounds; calisaya bark, 3¼ pounds; calamus root, 1½ pounds; orange peel, 4¾ pounds; cinnamon, 3½ ounces; cloves, 3½ ounces; nutmeg, 3½ ounces; cassia buds, 2 ounces; red saunders, 6½ pounds. First mash all the ingredients, put them in the spirit, and let them infuse for 14 days, stirring the mixture well twice every day. Rack off and color with 11 pints of brandy coloring, to get a dark red tint. Stir a quarter of an hour. Dissolve 30 pounds of white sugar in 30 gallons of water, add, and again stir for half an hour. Let the mixture rest for four or five days, and when bright, bottle. If the saunders is not used, the color will be a bright amber. Compounded according to the above directions this will yield about 120 gallons at 25 degrees below proof.

2840. Bitters, Alterative and Tonic.

Fluid extract hops 16 fl. ounces.
 Fluid extract red cinchona 8 fl. ounces.
 Fluid extract sarsaparilla 6 fl. ounces.
 Fluid extract hydrastis.. 6 fl. ounces.
 Fluid extract podophyllum 4 fl. ounces.
 Oil wintergreen 6 fl. drams.
 Oil sassâfras 3 fl. drams.
 Oil peppermint 2 fl. drams.
 Oil lemon 2 fl. drams.
 Sugar 6 pounds.
 Alcohol 2 gallons.
 Water enough to make.. 12 gallons.

2841. Bitters, Angostura.

Take 4 ounces of gentian root, 10 ounces each of calisaya bark, Canada snake-root, Virginia snake-root, licorice root, yellow bark, allspice, dandelion root and Angostura bark, 6 ounces cardamom seeds, 4 ounces each of balsam of tolu, rhubarb

and galangal, 1 pound of orange peel, 1 pound of alkanet root, 1½ ounces caraway seed, 1½ ounces of cinnamon, 1½ ounces of cloves, 2 ounces of nutmeg, coriander seed, catechu and wormwood, 1 ounce of mace, 1¼ pounds of red saunders, and 8 ounces of turmeric. Pound all separately and mix together, macerating for 15 days in 50 gallons of proof spirit. Before filtering, add 30 pounds of honey.

2842. Bitters, Crown Bark.

Tincture cinchona com-pound 1½ ounces.
 Tincture nux vomica..... 1½ drams.
 Tincture cardamom com-pound 6 drams.
 Spirit ammonia aromatic. 1 ounce.
 Simple syrup 1 ounce.
 Water enough to make.... 20 ounces.

2843. Bitters, Herb.

Tamarack bark..... 6 ounces.
 Juniper berries..... 6 ounces.
 Prickly ash bark..... 4 ounces.
 Wild cherry bark..... 3 ounces.
 Senega 3 ounces.
 Tansy 1 ounce.
 Whisky, or diluted alcohol. 8 pints.
 Molasses 4 pints.
 Water, sufficient.

Exhaust the plants, coarsely powdered, by percolation with the whisky, and then with enough water to complete twenty pints of percolate. To this add the molasses, and filter.

2844. Bitters, Hop.

Orange peel..... 4 parts.
 Sweet flag..... 2 parts.
 Saxifrage 2 parts.
 Hops 1 part.
 Sugar 8 parts.
 Alcohol 32 parts.
 Water 48 parts.

2845. Bitters, Hop.

Hops 2 ounces.
 Dandelion 2 ounces.
 Gentian 2 ounces.
 Chamomile 2 ounces.
 Stillingia 2 ounces.
 Orange peel..... 2 ounces.
 Alcohol, water, of each... 77 fl. ounces.
 Syrup, simple..... 12 fl. ounces.

Exhaust the solids with the alcohol and water, and add the syrup.

2846. Bitters, Orange.

Seville orange peel, 1 pound; lemon peel, ½ pound; gentian root, ½ pound; ginger, ½ pound. Bruise separately and set in an open cask or large crock, and add 3 gallons of water. Macerate for 3 or 4 days, and then add 1 gallon of syrup and 1

quart of spirits of wine. Filter off and press the marc. The addition of a teaspoonful each of broken cinnamon and cloves adds much to the stomachic qualities and taste of the bitters. Twice the quantity of quassia may be used instead of the gentian, or half of each in proportion.

2847. Bitters, Peruvian Bark.

Grind to a coarse powder $\frac{1}{2}$ pound cardamom seeds, $\frac{1}{8}$ pound nutmeg, $\frac{1}{4}$ pound grains of paradise, $\frac{1}{2}$ pound cinnamon, $\frac{1}{4}$ pound cloves, $\frac{1}{4}$ pound ginger, $\frac{1}{4}$ pound orange peel, $\frac{1}{2}$ pound lemon peel, $\frac{1}{4}$ pound gentian root; macerate them in $4\frac{1}{4}$ gallons of 95 per cent alcohol, and add, before filtering, a syrup made with $4\frac{1}{2}$ gallons of water and 12 pounds of sugar.

2848. Bitters, Peruvian Bark.

Take of red Peruvian bark, 8 ounces; orange peel, 8 ounces; $1\frac{1}{2}$ drams each of cinnamon, cloves and nutmeg; and 75 cayenne pepper seeds. Infuse them, well bruised, in 8 gallons of proof spirit for 15 or 20 days, stirring every day. Draw off and filter.

2849. Bitters, Spring.

Aloes 6 ounces.
Sassafras 8 ounces.
Hops 2 ounces.
Gentian 4 ounces.
Chamomile 2 ounces.
Acetic acid, U. S. P. 1 ounce.
Alcohol 1 quart.
Water, sufficient quantity.. 1 gallon.

Mix acid and alcohol with 2 quarts of water. Macerate 24 hours, then percolate, adding enough hot water to make 1 gallon.

2850. Bitters, Stomach Vienna.

Dissolve:

Oil orange peel..... 40 drops.
Oil balm..... 40 drops.
Oil angelica..... 40 drops.
Oil marjoram..... 24 drops.
Oil wormwood..... 24 drops.
Oil cinnamon..... 24 drops.
Oil coriander..... 24 drops.
Oil mace..... 24 drops.
Cognac essence..... $\frac{1}{2}$ fl. ounce.
Alcohol, 90 per cent..... $1\frac{3}{4}$ gallons.

Sweeten the solution with $7\frac{1}{4}$ pounds of sugar, dissolved in $2\frac{1}{2}$ quarts of water; color red, and filter.

2851. Bitters, Orange.

Macerate 6 pounds of orange peel for 24 hours with one gallon of water, and then cut the yellow peel from off the white; or

purchase the peel cut very thin in the first instance, chop it fine or run it through a coarse mincer, and then macerate with $4\frac{1}{4}$ gallons of 95 per cent alcohol for two weeks, adding afterwards a syrup made of 16 pounds of sugar dissolved in $4\frac{1}{4}$ gallons of water. Filter through flannel.

2852. Bitters, Stomach.

Rye whisky..... 1 gallon.
Orange peel, ground..... 6 ounces.
Gentian root, ground..... 4 ounces.
Roman Chamomile flowers. 2 ounces.

Macerate for 7 days, occasionally shaking the mixture; then express, and filter through paper.

2853. Bitters, Stomach.

Oil orange peel..... 60 drops.
Oil calamus..... 40 drops.
Oil cardamom..... 40 drops.
Oil angelica..... 40 drops.
Oil wormwood..... 40 drops.
Oil ginger..... 40 drops.
Oil marjoram..... 40 drops.
Cognac essence..... 2 fl. drams.
Alcohol, 90 per cent..... $1\frac{3}{4}$ gallons.

Sweeten the solution with $5\frac{1}{2}$ pounds of sugar, dissolved in $1\frac{1}{2}$ gallons of water, and filter.

2854. Bitters, Stomach.

Comminute:

Speedwell $\frac{1}{2}$ ounce.
Mint $\frac{1}{2}$ ounce.
Balm..... $\frac{1}{2}$ ounce.
Wormwood $\frac{1}{2}$ ounce.
Arum root..... $\frac{1}{2}$ ounce.
Zedoary..... $\frac{1}{2}$ ounce.
Calamus root..... $\frac{1}{2}$ ounce.
Small pomegranates..... $\frac{1}{2}$ ounce.
Caraway seed..... $\frac{1}{2}$ ounce.
Cinnamon..... $\frac{1}{2}$ ounce.

Pour over them $1\frac{1}{4}$ quarts of good whisky and macerate for 14 days in a warm place, frequently shaking. Then press the liquor out, filter and bottle.

2855. Bitters, Stomach.

Oil orange peel..... 40 drops.
Oil wormwood..... 40 drops.
Oil mint..... 40 drops.
Oil calamus..... 40 drops.
Oil marjoram..... 20 drops.
Oil cinnamon..... 20 drops.
Oil cardamom..... 20 drops.
Oil cloves..... 20 drops.
Cognac essence..... $1\frac{1}{4}$ fl. drams.
Alcohol, 90 per cent..... $1\frac{3}{4}$ gallons.

Sweeten the solution with $6\frac{1}{2}$ pounds of sugar, dissolved in $1\frac{1}{2}$ gallons of water, color the liquor brown and filter.

2856. Bitters, Stomach.

Comminute:

Calamus	2 ounces.
Anise seed.....	2 ounces.
Caraway seed.....	2 ounces.
Fennel	2 ounces.
Ginger	1½ ounces.
Cinnamon	1½ ounces.
Mace	½ ounce.
Cloves	1 ounce.
Lemon peel.....	4¾ ounces.
Galanga	1 ounce.
Zedoary	1 ounce.
Cubebs	1 ounce.
Pepper	½ ounce.
Sassafras bark	¾ ounce.
Rose leaves.....	1½ ounces.
Myrrh	1½ ounces.
Lavender blossoms.....	1½ ounces.
Orris root.....	2 ounces.

Pour 2 gallons of whisky and 1¾ pints of water over the ingredients, let them macerate for eight days; then press them out, filter the liquor, and add some common salt and 4½ pounds of crushed sugar.

2857. Bitters, Tonic.

St. Croix rum.....	1 gallon.
Bitter orange peel, ground.	4 ounces.
Gentian root, ground.....	3 ounces.
Nutmeg, ground....	¼ ounce.
Cloves, ground.....	⅛ ounce.
Syrup	6 ounces.
Cinnamon, ground.....	½ ounce.

Macerate seven days; express and filter.

2858. Bitters, Union.

Ground gentian.....	4 ounces.
Ground Peruvian bark.....	2 ounces.
Ground Roman chamomile flowers.....	1 ounce.
Ground quassia.....	½ ounce.
Ground orange peel.....	½ ounce.
Alcohol, 50 per cent.....	1 gallon.

Macerate for 14 days; express, and filter.

2859. Bitters, Wine.

Golden seal root, powdered.	1 dram.
Tulip tree bark.....	1 dram.
Bitter root.....	1 dram.
Prickly ash berries.....	30 grains.
Sassafras	30 grains.
Capsicum	30 grains.
Sherry wine, sufficient, or..	3 pints.

Exhaust the drugs by maceration or percolation, with enough wine to obtain three pints. Dose from ½ to 2 fluid ounces.

2860. Bitters, Wild Cherry.

Wild cherry bark.....	50 parts.
Peruvian bark.....	6 parts.
Cardamom	5 parts.
Hazelnut.....	3 parts.
Orange peel (sweet).....	10 parts.

Digest in 600 parts of dilute alcohol for

eight days; press out, filter and add 100 parts of honey, 100 parts simple syrup, and sufficient water to bring the whole up to 600 parts.

2861. Alterative Tonic.

Mercury bichloride.....	1 grain.
Solution arsenious acid.....	1 dram.
Tincture chloride iron.....	4 drams.
Hydrochloric acid, dilute....	4 drams.
Syrup	3 ounces.
Water enough to make.....	6 ounces.

A dessert-spoonful in a wineglass of water after each meal.

2862. Tonic for Anaemia.

Sodium salicylate.....	4 drams.
Glycerine	2 ounces.
Oil wintergreen.....	20 minims.
Tincture iron.....	4 drams.
Citric acid.....	10 grains.
Solution ammonia citrate	

(B. P.) enough to make.. 4 ounces.

Dessert-spoonful in water three or four times a day.

2863. Tonic for Anaemia.

Salicylic acid.....	320 grains.
Pyrophosphate iron.....	80 grains.
Sodium pyrophosphate.....	16 grains.
Distilled water.....	8 ounces.

Take a tablespoonful every three hours.

2864. Mixture Arseniate Iron.

Wine of iron.....	3 ounces.
Solution potassium arsen- late	½ ounce.
Syrup	1½ ounces.
Water	3 ounces.

Dose, one teaspoonful, diluted, after each meal.

2865. Tonic, General.

Quinine sulphate.....	16 grains.
Strychnine sulphate.....	½ grain.
Potassium citrate.....	1½ drams.
Tincture ferric chloride..	5 drams.
Syrup	1 ounce.
Water enough to make..	4 ounces.

Teaspoonful three or four times a day.

2866. Tonic, Iron.

Gentian	2 ounces.
Bitter orange.....	1 ounce.
Calamus	1 ounce.
Tincture citro-chloride of iron	1 ounce.
Rectified spirit.....	4 ounces.
Water	8 ounces.
Dextrin syrup.....	4 ounces.

Exhaust the vegetable drugs with the spirit and water previously mixed, adding sufficient of a menstruum of the same alcoholic strength until 12 fluid ounces are obtained. To this tincture add the iron, and mix with the dextrin syrup.

2867. Tonic, Wine.

Extract of cinchona..... 6 parts.
Tincture nux vomica..... 2 parts.
Bordeaux wine (claret).... 450 parts.
Syrup bitter orange peel.... 90 parts.

2868. Tonic Kola Wine.

Fluid extract kola..... 30 parts.
Tincture nux vomica..... 10 parts.
Syrup orange peel..... 100 parts.
Malvoisie or sherry wine
sufficient to make..... 1,000 parts.

2869. Tonic Nervine Wine.

Phosphoric acid dilute..... 2 parts.
Wine cinchona..... 12 parts.
Tincture valerian ammoni-
ated 6 parts.
Glycerine 10 parts.
Sherry 20 parts.

Dose, 1 to 2 teaspoonfuls 3 to 4 times a day.

2870. Tonic, Philadelphia.

Tincture chloride iron..... $\frac{1}{2}$ ounce.
Acetic acid, dilute..... 1 ounce.
Solution acetate ammo-
nium $4\frac{1}{2}$ ounces.
Syrup orange peel..... $1\frac{1}{2}$ ounces.
Glycerine $\frac{1}{2}$ ounce.

2871. Tonic, Quinine.

Quinine sulphate..... 1 dram.
Phosphoric acid dilute.... $1\frac{1}{2}$ ounces.
Tincture orange..... 3 ounces.
Glycerine 3 ounces.
Tincture nux vomica..... 6 drams.
Spirit chloroform..... 6 drams.
Distilled water, enough to
make 50 ounces.

Dose, one to two tablespoonfuls.

2872. Tonic, Quinine and Iron.

Sulphate of quinine..... 3 drams.
Solution perchloride of iron. 1 ounce.
Spirit chloroform..... 2 ounces.
Tincture calumba..... 2 ounces.
Syrup 4 ounces.
Glycerine 4 ounces.
Orange flower water..... 24 ounces.
Distilled water to..... 64 ounces.

Mix the iron solution with 10 ounces of the orange flower water, and in this dissolve the quinine. Then add the other ingredients and make up to 64 ounces. Set aside for 24 hours, and filter.

2873. Tonic, Quinine and Iron.

Citrate of iron and quinine 1 ounce.
Tincture of orange..... 1 ounce.
Chloric ether (Duncan's).. 2 ounces.
Glycerine 2 ounces.
Rectified spirit..... 1 ounce.
Distilled water to..... 48 ounces.

Dissolve the citrate in 20 ounces of water,

and to this add the other ingredients in the above order. Set aside for a few days, and filter. Dose for adults: One tablespoonful three times a day, an hour before meals.

2874. Tonic, Roxa (Elixir Bark and Celery).

Celery seed, powdered... 2 ounces av.
Red cinchona..... 1 ounce.
Orange peel..... $\frac{1}{4}$ ounce.
Coriander seed..... $\frac{1}{4}$ ounce.
*Lemon peel..... $\frac{1}{4}$ ounce.
Muriatic acid..... 1 minims.
Alcohol 5 fl. ounces.
Glycerine 3 fl. ounces.
Water 4 fl. ounces.
Syrup 4 fl. ounces.

*Or oil lemon its equivalent.

Mix all the drugs and grind to about No. 40 powder.

Add the mixture of acid, alcohol, glycerine and water; macerate 24 hours, then percolate, adding enough alcohol and water in the proportions given to make 12 fluid ounces. Add the syrup, and if necessary filter. The flavoring may be altered to suit. Some like rose. Add instead then, of the lemon, orange and coriander, red rose leaves, powdered, 1 ounce.

2875. Tonic Stomachic

Gentian root..... 4 ounces.
Orange peel..... 1 ounce.
Coriander seed..... 1 ounce.
Alcohol 32 ounces.
Water, enough to make.... 1 gallon.

Allow to macerate several days; express, and filter. The filtered liquid may be colored a rich brown if desired by caramel. Dose, one tablespoonful three or four times a day.

BLOOD PURIFIERS.**2876. Blood Mixture.**

Solution potassa..... 30 minims.
Potassium iodide..... 64 grains.
Spirit chloroform..... 4 drams.
Compound decoction sar-
saparilla 2 ounces.
Distilled water, enough to
make 8 ounces.

Dose: One to two tablespoonfuls.

2877. Blood Mixture.

Chloroform 12 minims.
Alcohol $\frac{1}{2}$ ounce.
Solution potassa..... $\frac{1}{2}$ dram.
Potassium iodide..... 64 grains.
Distilled water, enough to
make 8 ounces.
Burnt sugar, a sufficiency.

Dose: One to two tablespoonfuls.

2878. Blood Remedy.

Sarsaparilla root..... 1 pound.
 Burdock root..... 1 pound.
 Dandelion root..... ½ pound.
 Mandrake root..... ¼ pound.
 Rhubarb 2 ounces.
 Red clover blossoms..... ½ pound.
 Bolling water, about..... 3 gallons.

Steep over a slow fire for 12 hours. Strain through a fine cloth and, while still hot, add granulated sugar, 5 pounds. If it does not dissolve, add a little more heat. Then take

Iodide of potassium..... 2½ ounces.

Alcohol, 95 per cent..... 1 quart.

Mix all together and add water to make 4 gallons.

Dose, 1 tablespoonful three times a day a half hour after meals.

2879. Blood Purifier.

Burdock root..... 4 ounces.
 Blue flag root..... 1 ounce.
 Dandelion root..... 3 ounces.
 Sassafras bark..... 1 ounce.
 Sarsaparilla 4 ounces.
 Wild cherry bark..... 2 ounces.

Mix the cut ingredients thoroughly and make a quart of decoction. Dose for an adult, a wine-glassful.

2880. Blood Purifier.

Fluid extract cinchona.... 2 ounces.
 Fluid extract calumba.... 2 drams.
 Fluid extract guaiacum.... 4 drams.
 Fluid extract licorice..... 4 drams.
 Tincture figwort..... 4 drams.
 Podophyllin 15 grains.
 Alcohol (for dissolving podophyllin) 2 drams.
 Glycerine 12 ounces.

Dose, 1 teaspoonful three times a day after meals.

2881. Blood Purifier.

Pine buds (shoots)..... 30 parts.
 Guaiac wood..... 20 parts.
 Sassafras bark..... 5 parts.
 Juniper berries..... 10 parts.
 Whisky or diluted alcohol.. 360 parts.

Dose, 30 to 60 minims two to four times a day.

2882. Blood Purifier.

Fluid extract sarsaparilla. 1 ounce.
 Fluid extract stillingia.... 1 ounce.
 Fluid extract yellow dock. 1 ounce.
 Podophyllin 3 grains.
 Water 4 ounces.
 Simple elixir..... 4 ounces.
 Alcohol 2 ounces.
 Glycerine 2 ounces.
 Potassium iodide..... 90 grains.

From 1 tea to one dessert-spoonful three times a day.

2883. Blood Purifier.

Fluid extract sarsaparilla
 compound 5 ounces.
 Tincture prickly ash..... 10 ounces.
 Fluid extract poke root.... 15 ounces.
 Fluid extract burdock..... 15 ounces.
 Fluid extract stillingia.... 15 ounces.
 Teaspoonful three or four times a day.

2884. Blood Purifier, Alternative Mixture.

Tincture prickly ash bark. 10 drams.
 Fluid extract burdock..... 2 ounces.
 Fluid extract poke root.... 2 ounces.
 Fluid extract stillingia.... 2 ounces.
 Fluid extract sarsaparilla,
 enough to make..... 3 pints.
 Dose, teaspoonful three times a day.

2885. Blood Purifier, Aperient Tonic.

Buckthorn bark..... 5 pounds.
 Sodio-potassium tartrate... 2 pounds.
 Potassium bicarbonate.... 2 ounces.
 Sugar 6 pounds.
 Alcohol 6 pints.
 Spirit lemon U. S. P..... 3 ounces.
 Tincture ginger..... 3 ounces.
 Oil anise..... 1 dram.
 Water, enough.

With sufficient water make 3 gallons of decoction from the buckthorn bark (deprived of bitterness by the addition of calcined magnesia), and dissolve in it the sodio-potassium tartrate, potassium bicarbonate and sugar. After allowing to stand for some time, clarify by straining through flannel. Then mix the remaining ingredients and incorporate with the decoction. Dose, from 1 to 2 tablespoonfuls.

2886. Blood Purifying Drops, Laxitropfen.

Jalap, coarsely powdered.. 150 grams.
 Aloes 2 grams.
 Oil star anise 2 grams.
 Oil caraway 2 grams.
 Alcohol 200 grams.

Macerate one day, then add dilute alcohol, 300 grams; strain, adding a sufficiency of dilute alcohol through the strainer, to the liquid, to bring the measure to 500 grams; to the strained filtrate mix glycerine, 500 grams. Dose, as a mild purgative, 10 grams.

2887. Blood Purifier, Red Clover.

Fluid extract red clover... 8 ounces.
 Alcohol 5 ounces.
 Syrup 36 ounces.
 Potassium iodide 3 drams.
 Water 2 ounces.

2888. Blood Purifier, Sarsaparilla.

Potassium iodide 320 grains.
 Water 2 fl. ounces.
 Extract burdock 2 fl. ounces.
 Compound syrup
 sarsaparilla 8 fl. ounces.
 Syrup enough to make. 16 fl. ounces.

2889. Blood Purifier, Sarsaparilla.

Potassium iodide 90 grains.
 Sugar 1 ounce.
 Fluid extract stillingia.... 2 drams.
 Fluid extract yellow dock. 3 ounces.
 Fluid extract sarsaparilla. 3 ounces.
 Alcohol 3 ounces.

2890. Sarsaparilla and Potassium Iodide.

Sarsaparilla, ground ... 1 pound.
 Burdock root 3 ounces.
 Dandelion root 3 ounces.
 Prickly ash bark 3 ounces.
 Chamomile, Roman 3 ounces.
 Sassafras bark 4 ounces.
 Iodide potassium 1 ounce av.
 Salicylate soda ½ ounce av.
 Glycerine 12 fl. ounces.
 Alcohol 1½ pints.
 Water enough to make.. 1 gallon.

Grind all the herbs to No. 20 powder.
 Mix the glycerine and alcohol with 2 quarts of water; macerate 24 hours and percolate. When the liquid has ceased to drop, pour in hot water until a gallon altogether has been percolated. Add the iodide of potash and salicylate soda and dissolve. If not sufficiently dark to suit the eye, add caramel, 1 fluid ounce.

2891. Sarsaparilla With Potassium Iodide.

Compound fluid extract
 sarsaparilla 2 ounces.
 Compound fluid extract
 stillingia 1 ounce.
 Fluid extract guaiacum... ½ ounce.
 Fluid extract
 buckthorn bark ½ ounce.
 Oil wintergreen 5 minims.
 Oil sassafras 5 minims.
 Elixir calisaya (made
 from alkaloids without
 acid) 4 ounces.
 Potassium iodide 2 drams.
 Syrup 8 ounces.

2892. Sarsaparilla and Stillingia.

Compound fluid extract
 sarsaparilla 2 ounces.
 Fluid extract stillingia.... 1 ounce.
 Fluid extract yellow dock. 1 ounce.
 Syrup 12 ounces.

2893. Sarsaparilla and Turkey Corn.

Compound fluid extract
 sarsaparilla 2 fl. ounces.
 Fluid extract sassafras... 1 fl. ounce.
 Fluid extract Turkey
 corn 1 fl. ounce.
 Syrup 12 fl. ounces.

2894. Sarsaparilla and Yellow Dock.

Fluid extract
 sarsaparilla 5 fl. ounces.
 Fluid extract
 yellow dock 4 fl. ounces.
 Fluid extract stillingia. 5 fl. ounces.
 Fluid extract
 May-apple root 1 fl. ounce.
 Fluid extract senna 2 fl. ounces.
 Oil wintergreen 20 minims.
 Oil sassafras 20 minims.
 Alcohol dilute 20 fl. ounces.
 Syrup 36 fl. ounces.

2895. Blood and Liver Syrup.

Syrup stillingia compound. 8 ounces.
 Fluid extract senna 1 ounce.
 Fluid extract podophyllum. ¼ ounce.
 Fluid extract licorice 1 ounce.
 Potassium bromide 3 drams.
 Adult dose, a teaspoonful three times a day.

ASTHMA, CATARRH, HAY FEVER, COLDS, ETC.

2896. Catarrh Cure.

Carbolic acid..... ½ ounce.
 Glycerine 2 ounces.
 Distilled water..... 1 ounce.
 Fluid extract stramonium.. ½ ounce.
 Add one teaspoonful to one-half pint of water, and use with a nasal douche.

2897. Catarrh Cure.

Vaseline 1 ounce.
 Thymol 3 grains.
 Carbonate bismuth..... 15 grains.
 Oil wintergreen..... 2 minims.

The above is said to be a good substitute for Ely's cream balm.

2898. Acute Catarrh.

Tincture iodine..... ½ ounce.
 Acid carbolic 2 drams.

Mix. Place a small wide-mouthed bottle containing a moistened sponge in a vessel of hot water. Drop five or ten drops of the solution on the sponge, and as the vapor of the iodine ascends with the vapor of the water, inhale it.

2899. Catarrh and Laryngitis.

Resorcin 2 drams.
 Sodium salicylate..... 1 dram.
 Sodium biborate..... 1 dram.
 Glycerine 2 fl. ounces.
 Water, enough to make... 8 fl. ounces.

This solution will soften and bring away all hardened secretions, relieve the congestion and lessen the usual discharge.

2900. Catarrh Powder.

Bismuth subnitrate..... 3 drams.
 Powdered acacia..... 2 drams.
 Powdered talc..... 2 drams.
 Morphine muriate..... 1 grain.

2901. Anti Catarrhal Salts.

Absolute phenol..... 24 parts.
 Carbonate of ammonium.. 16 parts.
 Strong solution of ammonia 44 parts.
 Oil of lavender..... 1½ parts.
 Camphor 3 parts.
 Pine sawdust (sifted) quantity sufficient.
 Mix.

2902. Menthol Catarrh Snuff.

Incorporate 3 grams menthol in a finely powdered mixture of 50 grams milk sugar, 30 grams roasted coffee, 10 grams sugar, 5 grams orris root and 2 grams boric acid.

2903. Catarrh Snuff.

Scotch snuff, 1 ounce; chloride of lime, dried and pulverized, 1 good teaspoonful. Mix and bottle, corking tightly.

2904. Catarrh Snuff.

Bismuth sub-nitrate..... 1½ drams.
 Powdered benzoin..... 1½ drams.
 Powdered boric acid..... 1 dram.
 Menthol 3 grains.
 A pinch 5 or 6 times daily, well drawn up.

2905. Catarrh Snuff.

Cocaine hydrochlorate..... 10 grains.
 Oil eucalyptus..... 3 grains.
 Iodoform 1 dram.
 Sugar of milk..... 1 ounce.

2906. Catarrh Snuff.

Powdered belladonna leaves 20 grains.
 Cocaine muriate 5 grains.
 Oil of rose..... 1 drop.
 Powdered acacia..... ½ ounce.

2907. Catarrh Snuff.

Powdered starch..... 125 parts.
 Bismuth subnitrate..... 125 parts.
 Boracic acid, powdered... 46 parts.
 Camphor, powdered..... 3 parts.
 Morphine sulphate..... 1 part.

2908. Catarrh Snuff.

Powdered loaf sugar..... ½ ounce.
 Powdered borax..... ¼ ounce.
 Powdered common salt.... ¼ ounce.
 Oil peppermint..... 4 drops.
 Mix, and triturate thoroughly. To be used as a snuff several times daily.

2909. Snuff for Nasal Catarrh.

Tannic acid..... 8 grains.
 Powdered orris root..... 6 drams.
 Powdered sugar..... 6 drams.

2910. Chronic Rhinitis.

Menthol, citric acid, lithium carbonate, and powdered benzoin, equal parts.
 Fix or six pinches daily for each nostril.

2911. Cephalic Snuff.

For headache, catarrh, toothache, and other nervous complaints:

White hellebore..... 1 ounce.
 Orris root..... ½ ounce.
 Bayberry root, powdered... ½ ounce.
 Starch, powdered..... 6 ounces.
 Oil of cloves..... 10 drops.

Rub up the oil with the starch and add the other powders, mixing by slight rubbing.

2912. Spray for Catarrh.

Carbolic acid..... 10 minims.
 Glycerine 2 drams.
 Vaseline..... 2 ounces.

Warm, and use as a spray every four hours.

2913. Scrofulous Rhinitis.

Sulphophenate of zinc.... 20 centigrams.
 Tannate of zinc..... 2 grams.
 Pulverized tobacco..... 10 grams.
 Salicylate of bismuth.... 4 grams.
 Iodol 3 grams.

2914. Chronic Catarrhal Rhinitis.

Pulverized alum..... 2 grams.
 Borax 2 grams.
 Menthol 20 centigrams.
 Tannate of zinc..... 3 grams.
 Tannate of bismuth..... 3 grams.
 Lycopodium 8 grams.

2915. Asthma.

Potassium iodide..... 1½ drams.
 Fowler's solution..... 1 dram.
 Hoffman's anodyne..... 2 ounces.
 Tincture belladonna..... 2 drams.
 Spirit orange, enough to make 6 ounces.

Take 2 teaspoonfuls in water an hour after meals.

2916. Asthma.

Fluid extract nux vomica.. 1 dram.
 Fluid extract cuphorbia
 pillulifera 6 drams.
 Syrup hydriodic acid..... 5 drams.
 Syrup hypophosphites com-
 pound 1½ ounces.
 Syrup 1 ounce.
 Water 2 ounces.

Dose, 1 tablespoonful every three hours.
 Shake well.

2917. Asthma.

Tincture lobelia..... 1 ounce.
 Ammonium iodide..... 2 drams.
 Ammonium bromide..... 3 drams.
 Syrup tolu..... 3 ounces.

Dose, a teaspoonful every one, two, three
 or four hours, as required.

2918. Asthma.

Potassium iodide..... 2 grams.
 Tincture lobelia..... 2 grams.
 Tincture senega..... 2 grams.
 Opium extract..... 0.02 gram.
 Distilled water..... 180 grams.

Tablespoonful mornings and evenings in
 a wineglassful of water.

2919. Asthma.

Powdered lobelia leaves,
 Powdered stramonium leaves,
 Potassium nitrate,
 Powdered black tea, of each, equal parts.

The fumes from the burning mixture are
 to be inhaled.

2920. Asthma.

Potassium nitrate..... 2 parts.
 Powdered aniseed..... 2 parts.
 Powdered stramonium leaves 4 parts.

A thimbleful of the mixture is placed in
 a conical heap on a plate and lighted at
 the top and the fumes inhaled.

2921. Asthma.

Stramonium leaves, ground. 4 ounces.
 Fluid extract belladonna.. 2 ounces.
 Tincture opium..... 2 ounces.
 Pulverized saltpetre..... 3 ounces.

Mix the powders thoroughly, add the
 liquids. Ignite small amount, inhaling the
 fumes.

2922. Asthma.

Fluid extract lobelia..... 10 drams.
 Fluid extract sanguinaria 4 drams.
 Fluid extract symplocar-
 pus..... 10 drams.
 Fluid extract grindella
 (from green leaves)..... 30 drams.
 Chloroform 6 drams.
 Extract malt..... 7½ ounces.

Dose, 1 teaspoonful every half hour in
 water until slight nausea and faintness are

experienced, or the attack has been re-
 lieved, after which continue the medi-
 cine in teaspoonful doses three times daily,
 after meals, for one or two months.

2923. Asthma Cigarettes.

Extract of stramonium..... 5 parts.
 Alcohol 45 parts.
 Tobacco 90 parts.
 Potassium iodide..... 5 parts.
 Potassium nitrate..... 5 parts.
 To make one hundred cigarettes.

2924. Asthma Cigarettes.

Belladonna leaves..... 5 grams.
 Stramonium leaves..... 5 grams.
 Digitalis leaves..... 5 grams.
 Sage leaves..... 5 grams.

Are extracted with

Hot water..... 1,000 grams.

And to the filtrate are added

Potassium nitrate..... 75 grams.
 Tincture benzoin..... 40 grams.

Into this liquid thin sheets of blotting
 paper are immersed one after another,
 where they are left for 24 hours, after
 which they are dried and cut up into
 sheets of desired size, which are made into
 cigarettes.

2925. Espic Cigarettes.

Belladonna leaves..... 22 parts.
 Hyoscyamus 12 parts.
 Stramonium 12 parts.
 Phellandrium 4 parts.
 Opium 1 part.

Mix and make into cigarettes.

**2926. Asthma Cigarettes, Vanque-
lin's.**

Sodium arseniate..... 20 centigrams.
 Extract of belladonna. 50 centigrams.
 Extract of stramonium 50 centigrams.

Dissolve the ingredients in the smallest
 possible amount of water, and imbibe in
 the solution a piece of bibulous paper suf-
 ficiently large to just take up the amount
 of liquid. Dry, and cut into twenty-four
 parts, each of which, rolled in proper pa-
 per, makes one cigarette.

2927. Essence for Asthma.

Tincture lobelia..... 10.0
 Tincture opium..... 1.0
 Cinnamon water..... 20.0
 Alcohol 20.0

Dose, teaspoonful.

2928. Asthma Inhalant.

Ether 1 ounce.
 Oil turpentine..... 4 drams.
 Benzoic acid..... 4 drams.
 Tolu balsam..... 2 drams.

To be inhaled from a wide-mouthed bot-
 tle, during the attack.

2929. Maekenzie's Asthma Powder.

Lobelia..... 1 ounce.
 Black tea..... 1 ounce.
 Stramonium 1 ounce.
 Potassium nitrate..... 1 ounce.
 Anise 1 dram.
 Fennel 1 dram.

Attention to the stomach will do most for many asthmatic patients. An important point is to take the heaviest meal early in the day, and very solid food after 2 p. m. Shower bath and out-of-door exercise, not, however, to a fatiguing extent, are serviceable. In special cases operative treatment of the nose and naso-pharynx is required.

2930. Influenza.

Codeine 1-6 grain.
 Antipyrine..... 10 grains.
 Sodium bicarbonate..... 3 grains.
 For 12 powders. One three times a day.

2931. Influenza.

Menthol 15 grains.
 Cocaine hydrochloride..... 3 grains.
 Lanolin ointment..... 1 ounce.
 Apply to nostrils.

2932. Influenza.

Sodium salicylate..... 30 grains.
 Acid hydrochloric, dilute.. 10 minims.
 Wine ipecac..... 1 dram.
 Simple syrup..... 1 ounce.
 Water to make..... 5 ounces.
 Tablespoonful three times a day.

2933. Influenza.

Acid phosphoric dilute.... 15 minims.
 Spirits chloroform 25 minims.
 Syrup squills 1 dram.
 Water to make 1 ounce.
 Four or six times every 24 hours.

2934. Influenza Tonic.

Acid nitric dilute 10 minims.
 Spirits chloroform ½ dram.
 Infusion cinchona 1 ounce.
 Three or four times a day.

2935. Influenza, Clayton's Mixture.

Ammonium carbonate 1 dram.
 Potassium bicarbonate 1 dram.
 Tincture orange 4 drams.
 Orange flower water 3 drams.
 Water to make 8 ounces.
 Two tablespoonfuls three times a day in half an ounce of lemon juice.

2936. Cough of Influenza.

Syrup tar 1½ ounces.
 Spirits ammonia aromatic. ½ ounce.
 Syrup wild cherry 1½ ounces.
 Potassium iodide ½ dram.
 Teaspoonful every two or four hours.

2937. Cold in the Head.

Menthol 3 grains.
 Powdered boracic acid 1 dram.
 Subnitrate of bismuth 1½ drams.
 Powdered benzoin 1½ drams.

A good-sized pinch of this may be snuffed up five or six times a day.

2938. Cold in the Head.

One and one-half grains muriate of morphia and 1 dram subnitrate of bismuth, to be used as a snuff, which should last at least 48 hours. It is made a little better by the addition of 10 grains of gum arabic.

2939. Cold in the Head.

As a preventive take these pills at bedtime:

Powdered aconite leaves... 3 grains.
 Calomel ¾ grain.
 Powdered ipecac ¾ grain.
 Extract of henbane 3 grains.

Make into two pills.

2940. Cold in the Head.

A teaspoonful of powdered camphor is placed in a jug half full of boiling water, and over the mouth of the vessel a paper cornucopia is fastened, the pointed end being cut off so as to fit the nostril. The vapor is now inhaled for 10 or 15 minutes. It is stated that three inhalations will cure the worst case.

2941. Snuff for Colds.

Sodium bicarbonate 2 grains.
 Magnesium carbonate
 (light) 3 grains.
 Menthol 1 grain.
 Cocaine hydrochlorate ... 4 grains.
 Milk sugar 1½ drams.
 Mix. Use as a snuff.

2942. Snuff for Hay Fever.

Boric acid 2.0 grams.
 Sodium salicylate 2.5 grams.
 Cocaine hydrochlorate ... 0.12 grams.

2943. Snuff for Hay Fever.

Borax 20 grains.
 Capsicum 15 grains.
 Ammonium carbonate..... 10 grains.

2944. Remedy for Hay Fever.

Camphor 1 dram.
 Chloroform 1 dram.
 Extract of belladonna..... 4 grains.
 Sodium bicarbonate..... 20 grains.
 Benzoinated lard..... 1 ounce.
 Rub together the first three, add the lard, and lastly the sodium bicarbonate. Apply freely to the nostrils with the little finger.

FAMILY SALVES, OINTMENTS, ETC.

2945. Black Salve, or Plaster.

Olive oil 20 ounces.
Lard 16 ounces.
Mutton suet 16 ounces.
Litharge 14 ounces.
Resin 8 ounces.
White wax 8 ounces.
Ivory black, sufficient to color.

Melt the oils and fats, and stir in the litharge; boil until the mass becomes of a brown color, then add the resin, wax, and lastly, the ivory black.

2946. Carbolic Salve.

Petrolatum 16 ounces.
Yellow wax..... 15-9 ounces.
Camphor 1 ounce.
Carbolic acid..... $\frac{3}{4}$ ounce.
Oil sassafras..... 30 minims.

Melt the carbolic acid, and while warm add the camphor and oil of sassafras. Melt the wax and add to the petrolatum, melting them together; while cooling, but still liquid, add the solution of camphor in carbolic acid, etc., and stir occasionally while cooling. This is an excellent carbolic ointment, the caustic properties of the carbolic acid being neutralized by the camphor.

2947. Domestic Salve.

Camphor 5 parts.
Carbolic acid..... 4 parts.
Vaseline 80 parts.
Diachylon plaster..... 30 parts.

Melt together the vaseline and the plaster, and stir in the camphor and carbolic acid when nearly cold.

2948. Green Mountain Salve.

Resin, 5 pounds; Burgundy pitch, bees-wax and mutton tallow, of each $\frac{1}{4}$ pound; oil of hemlock, balsam of fir, oil of origanum, oil of red cedar, and Venice turpentine, of each, 1 ounce; oil of wormwood, $\frac{1}{2}$ ounce; verdigris, very finely pulverized, 1 ounce. Melt the first articles together, and add the oils, having rubbed the verdigris up with a little of the oils, and put it in with the other articles, stirring well; then pour into cold water, and work as wax until cool enough to roll.

2949. O. K. Household Salve.

Citrine ointment..... 2 ounces.
Oil tar..... $\frac{1}{2}$ ounce.
Carbolic salve..... $\frac{1}{4}$ ounce.
Glycerine 2 ounces.
Mutton tallow, enough to make..... 1 pound.

Mix, and melt over a slow fire; stir until cold.

2950. Stick Salve.

Resin 6 ounces.
Black pitch..... 6 ounces.
Cacao butter..... 1 ounce.
Lard 3 ounces.

Melt over a gas flame, allowing the mixture to be heated for a few minutes afterwards, then pour into a dish of cold water, knead with the hands, and as soon as the mass is cool enough to handle, remove from the water and work until tough; then form into sticks.

2951. Ointment Aene.

Naphthol 1 part.
Precipitated chalk..... 1 part.
Green soap..... 1 part.
Vaseline 2 parts.

2952. Ointment Aene.

Resorcin 2 parts.
Salicylic acid..... 2 parts.
Green soap..... 3 parts.
Zinc ointment..... 3 parts.

2953. Ointment Aene.

Precipitated sulphur..... 1 part.
Powdered starch..... 1 part.
Zinc ointment..... 3 parts.

2954. Ointment Aene.

Salicylic acid..... $\frac{2}{3}$ part.
Lanolin 10 parts.
Vaseline 10 parts.
Distilled water..... 10 parts.

2955. Lotion Aene.

Powdered camphor..... 3 parts.
Powdered acacia..... 3 parts.
Precipitated sulphur..... 14 parts.
Lime water..... 80 parts.

Apply at night, with a rag.

2956. Ointment Elemi.

Elemi 1 pound.
Turpentine 10 ounces.
Suet 2 pounds.
Olive oil..... 2 ounces.

Melt the elemi with the suet; remove from the fire and add the turpentine and oil and strain.

2957. Ointment, Green.

Lard 900.0
Pulverized indigo..... 2.00
Pulverized curcuma 30.0
Alcohol 50.0

Digest on a water bath for two hours, frequently agitating, and strain through linen. While still warm mix with the following:

Yellow wax..... 100.0
Oil rosemary..... 10.0
Oil thyme..... 10.0
Oil juniper..... 2.5

Stir well until cold.

2958. Ointment, Green

Honey and beeswax, each $\frac{1}{2}$ pound; spirits of turpentine, 1 ounce; wintergreen oil and laudanum, each 2 ounces; finely powdered verdigris, $\frac{1}{4}$ ounce; lard, $1\frac{1}{4}$ pounds; mix by a stove fire in a copper kettle, heating slowly.

2959. Ointment Resolvent.

Iodide of lead..... 75 grains.
Iodide of potassium..... 30 grains.
Extract of belladonna..... 30 grains.
Extract opium..... 8 grains.
Lard 12 drams.

This ointment is recommended for use in cases of orchitis, to be applied night and morning.

2960. Ointment Sedative.

Morphine acetate..... 2 grains.
Lead carbonate..... 5 grains.
Lead acetate..... 15 grains.
Simple ointment..... 1 ounce.

2961. Ointment Sulphur, Compound.

Precipitated carbonate calcium 2 parts.
Sublimed sulphur..... 3 parts.
Tar 3 parts.
Green soap..... 6 parts.
Lard 6 parts.

2962. Ointment, Tetter.

White precipitate..... 20 grains.
Corrosive sublimate..... 10 grains.
Alcohol 1 fl. dram.
Acetate of lead..... $\frac{1}{2}$ dram.
Lard 1 ounce.

2963. Ointment Tobacco.

Yellow wax..... 45 grams.
Resin 45 grams.
Oil of myrrh..... 125 grams.
Melt and add:
Tobacco juice..... 90 grams.

2964. Ointment Wormwood.

Wormwood leaves..... 15 grams.
Lard 35 grams.
Camphor 5 grams.
Opium, powdered..... 1 gram.
Glycerine 15 grams.
Petrolatum 30 grams.

Add the wormwood to the lard and heat together for about one hour and strain. Triturate together the camphor, opium and petrolatum, and when the lard is sufficiently cooled mix together, adding the glycerine, and stir the ointment till cold.

2965. Cerate of Eggs.

Yolk of one egg.
Yellow wax..... $\frac{1}{2}$ ounce.
Oil of sweet almonds..... $1\frac{1}{2}$ ounces.

Melt the wax and the oil together and add the yolk of a hard boiled egg, triturating them together.

2966. Cerate of Opium.

Opium $\frac{1}{2}$ dram.
Yolk of one egg.
Mix well and add:
Simple cerate..... 1 ounce.
Mix and stir well.

2967. Cerate Phosphorated.

Phosphorated ether..... 5 parts.
Simple cerate..... 24 parts.
Mix.

2968. Cerate Pitch.

Burgundy pitch..... 6 parts.
Suet 4 parts.
White wax..... 3 parts.
Mix with gentle heat.

2969. Cerate Tobacco.

Beeswax, 3 ounces; yellow resin, 1 ounce; olive oil, 6 ounces; tobacco juice, 4 ounces; mix and evaporate to dryness, and when nearly cold add bergamot, 2 drams. Used to destroy pediculi, etc.

2970. Paint for Inflamed Joints.

Alcohol 1 ounce.
Green soap..... 1 ounce.
Oil of cade..... 1 ounce.
Paint over the part.

2971. Paint for Inflamed Joints.

Croton oil..... 1 dram.
Stronger ether..... 2 drams.
Tincture iodine..... 5 drams.
Paint on inflamed parts once in three days.

2972. Painting on the Skin.

Aristol 1 part.
Flexible collodion..... 9 parts.
Mix, and dispense in a dark-colored bottle.

2973. Painting on the Skin.

Aristol 1 part.
Olive oil..... 2 parts.
Lanolin 7 parts.
Dissolve the aristol in the oil and mix with the lanolin.

2974. Ichthyol Paint.

Ichthyol (ammonium sulphichthyolate) 3.0 grams.
Distilled water..... 10.0 grams.
Glycerine 10.0 grams.
Dextrin 10.0 grams.
Mix by the aid of gentle heat.
Useful in acne. The paint is used in the evening, and the parts washed with warm soap water in the morning. During the day a weak solution of corrosive sublimate is used as a lotion.

2975. Eczema.

Powdered camphor ½ dram.
 Powdered zinc oxide..... 3 drams.
 Glycerine 40 drops.
 Benzoinated lard..... 1 ounce.
 For external application.

2976. Eczema.

Powdered iodoform..... 30 grains.
 Subnitrate of bismuth.... 60 grains.
 Hydrate of chloral..... 15 grains.
 Glycerine 1 dram.
 Water 3 fl. ounces.
 Perfume, quantity sufficient.
 Shake, and apply one to three times a day.

2977. Cracked Nipples.

Compound benzoin tincture 16 minims.
 Olive oil..... 2¼ fl. drams.
 Lanolin 6 drams.
 To be applied, after nursing the child, during the first fortnight.

CORN, BUNIONS, ETC.

2978. Corns.

Pare the corns carefully with a sharp knife without drawing blood, and lightly apply the solid stick of nitrate of silver. In two or three days scrape away the hardened surface. A small, delicate, pinkish blister will be seen, which should be painted over with a 5 per cent solution of cocaine, and a small crucial incision made. Usually a head of pus will escape. Apply lead lotion dressing.

2979. Corns.

Moisten with a solution of boracic or salicylic acid, and cover with a layer of from 4 to 5 millimeters (one-fifth to one-quarter inch) with pure crystallized salicylic acid. Apply on the top of this a bit of borated lint of four thicknesses, and finally envelop the dressing with a piece of rubber adhesive plaster. In five or six days the corn will be completely detached. Of course, the dressing must not be touched during the time.

2980. Corns.

Tincture pine needles..... 400 parts.
 Liquor ammonia caustic.... 400 parts.
 Tincture of iodine..... 200 parts.
 Also suitable for frost bites.

2981. Corns.

One or two applications with a camel's hair pencil of a mixture of equal parts of glycerine and carbolic acid will take the pain entirely away.

2982. Corns.

For soft corns between the toes is recommended the application of salicylate collodion or sapo mollis 4 drams, acid salicylate 20 grains. Apply on a piece of lint every morning.

2983. Corns.

Tincture iodine..... 4 drams.
 Iodide iron..... 12 grains.
 Solution antimony chloride 4 drams.

2984. Corns.

Dissolve a few pearl buttons in the juice of a lemon; a creamy ointment will be produced in a few days, and this applied on a rag for a few days is a perfect cure for corns.

2985. Corns.

Salicylic acid..... 10 parts.
 Lactic acid..... 10 parts.
 Collodion 10 parts.

2986. Corns.

Solution cocaine hydrochlorate (using alcohol instead of water) 2 per cent..... 1 fl. dram.
 Salicylic acid..... ½ dram.
 Alcohol 1 dram.
 Fluid extract belladonna.. 40 minims.
 Collodion 80 minims.
 Apply to the corn with a straw or other convenient means.

2987. Corns.

Extract cannabis indica.... 1 part.
 Salicylic acid..... 10 parts.
 Oil of turpentine..... 5 parts.
 Acetic acid, glacial..... 2 parts.
 Collodion 82 parts.

2988. Corns.

Extract of Indian hemp.. 5 grains.
 Salicylic acid..... 30 grains.
 Rectified spirit..... ½ dram.
 Ether 1½ drams.
 Flexible collodion..... 4 drams.
 Place the extract in an ounce bottle and pour the spirit on it. Shake occasionally until dissolved. Measure the ether and put the acid upon it; it will dissolve by a few stirs with the glass rod. Pour this into the bottle, mix, and add the collodion.

2989. Hard Corns, Iron Per-Chloride for.

Iron per-chloride solution,
 Wine opium,
 Equal parts.
 Apply night and morning; during the day cover the part with cotton.

2990. Corn Collodion.

Venice turpentine..... 1 part.
 Chlorophyll, q. s.
 Salicylic acid..... 10 parts.
 Collodion 100 parts.

2991. Corn Plaster.

Salicylic acid,
 Powdered resin,
 Ether.

Spread over belladonna plaster.

2992. Corn Plaster.

Melt together 8 ounces yellow wax and 2 ounces Venice turpentine, and stir in 4 drams powdered verdigris.

2993. Corn Plaster.

Yellow wax..... 24 parts.
 Venice turpentine..... 3 parts.
 Resin 2 parts.
 Salicylic acid..... 2 parts.
 Balsam Peru..... 2 parts.
 Lanolin 4 parts.

2994. Corn Plaster.

Adhesive plaster..... 100 parts.
 Subacetate of copper..... 8 parts.
 Carbolic acid 8 parts.

2995. Corn Plaster.

Powdered galbanum..... 1 ounce.
 Turpentine 10 grains.
 Sal ammoniac, in fine powder..... 8 grains.

2996. Corn Plaster.

A ring of glycerine jelly about the diameter of the corn is painted round it by a fine, but stiff, bristle paint brush. When dry, a circular piece of the strongest salicylic plaster muslin (salicylic acid 40, creosote 40) is cut to fit with the ring of jelly; jelly is now painted over the ring and plaster, and a third coat should also be applied. When the third coat is almost dry, a layer of cotton wool is pressed on. The larger the surface covered with jelly, the less the local pressure on the corn. A single turn of soft bandage keeps the plaster in position. The dressing is changed once or twice a week, the horny layer acted on by the salicylic acid is removed, and a new dressing applied.

2997. Corn Plaster.

Galbanum plaster, 1 ounce; pitch, ½ ounce; lead plaster, 2 drams; melt them together and add verdigris and sal ammoniac (in fine powder), of each 1 dram.

2998. Corn Plaster (Kennedy's).

Beeswax, 1 pound; Venice turpentine, 5 ounces; verdigris (in fine powder), 1½ ounce; mix by a gentle heat, and spread on cloth. It is cut into pieces, and polished.

2999. Corn Salve.

Salicylic acid..... 1 dram.
 Resin ointment..... 7 drams.
 Melt the ointment and stir in the acid.

3000. Corn Salve.

Salicylic acid..... 10 parts.
 Balsam fir..... 5 parts.
 Resin 6 parts.

Melt the resin, add the balsam fir and stir in the salicylic acid as it cools. This preparation can be spread on any suitable medium for a plaster.

3001. Corn Salve.

Lanolin forms the basis of another salicylic acid plaster, and cocaine is added with the idea of making it painless. To form the plaster, mix 6 drams of salicylic acid thoroughly with 10 drams of lanolin. Dissolve 5 grains of hydrochlorate of cocaine in a small quantity of warm alcohol, and mix the solution with 1 fluid ounce of creosote. Mix ½ ounce of melted white wax with ½ ounce of vaseline, and add the creosote solution; to this add the cocaine solution, and mix.

3002. Corn Salve.

A caustic corn salve is made by mixing a hot saturated solution of caustic soda or potassa with twice its bulk of glycerite of starch.

3003. Corn Salve.

Yellow wax..... 6 ounces.
 Venice turpentine..... ¾ ounce.
 Pure resin..... ½ ounce.
 Salicylic acid..... ½ ounce.
 Balsam Peru..... ½ ounce.
 Vaseline 1 ounce.

Melt over slow fire, or the best way is melt on water bath. Stir until cool.

3004. Corn Salve.

Salicylic acid..... 10 parts.
 Lactic acid..... 10 parts.
 Simple cerate..... 80 parts.

3005. Corn Salve.

Dried carbonate of soda, ½ ounce; lard, 1 ounce; smalts (to color), quantity sufficient. Mix. Applied on a piece of rag, and renewed night and morning. Use for corns only.

3006. Bunions.

Carbolic acid..... 2 drams.
 Tincture of iodine..... 2 drams.
 Glycerine 2 drams.

Apply with a camel's hair pencil every day. Copper oleate applied in the form of a plaster is also serviceable.

3007. Bunions.

Chrysarobin ½ dram.
 Cocaine hydrochlorate..... 10 grains.
 Gutta-percha ½ dram.
 Chloroform 5 drams.
 Penicillin every night and morning over the
 corn or bunion.

EYE LOTIONS AND WASHES.

3008. Eye Cerate.

Zinc oxide ½ dram.
 Simple cerate..... 1 ounce.
 Soak the eyelids with warm water and
 apply the cerate at night before retiring.

3009. Useful Collyrium.

Solution of peroxide of
 hydrogen (10 vols.)..... 4 drams.
 Tannin (pure) 5 grains.
 Rose water to..... 8 fl. ounces.
 To make an 8-ounce collyrium, to be used
 as directed.

3010. Eye Lotion.

Sodium borate..... ½ dram.
 Camphor water..... 3 ounces.
 Mix, dissolve and filter.
 A few drops in the eye 3 or 4 times a day.

3011. Eye Lotion.

Corrosive sublimate..... 1 grain.
 Chloride of ammonium... 6 grains.
 Cochineal 1½ grains.
 Alcohol 1 fl. dram.
 Water 8 fl. ounces.
 Mix and filter after 12 hours.

3012. Eye Lotion (Mackenzie's).

Corrosive sublimate..... 1 grain.
 Chloride of ammonium... 6 grains.
 Cochineal 1½ grains.
 Alcohol 1 fl. dram.
 Water 8 fl. ounces.
 Mix and filter for 12 hours.

3013. Sedative Eye Lotion.

Sulphate of atropine..... 2 grains.
 Wine opium..... 2 drams.
 Sulphate of zinc..... 40 grains.
 Alum 40 grains.
 Cochineal coloring..... 2 drams.
 Water 1 pint.
 Mix, and allow to stand for two days,
 then filter. This should be mixed with an
 equal volume of hot water before it is
 used.

3014. Ophthalmic Ointment.

White precipitate..... 1.0
 Zinc oxide, commercial..... 2.0
 Armenian bole 2.0
 Lard 5.0

3015. Pagenstecher's Ointment.

Yellow oxide of mercury.... 15 grains.
 Vaseline 2 ounces.
 Mix. If cold cream be substituted for
 vaseline a very cooling article is obtained,
 which is pleasant to use and very popular
 for inflamed eyelids.

3016. Eye Salve.

Mercuric oxide, yellow.. 90 grains.
 Zinc oxide 45 grains.
 Camphor 20 grains.
 Petrolatum 3 troy ounces.

3017. Eye Salve.

Morphine sulphate 1½ grains.
 Benzoic acid 4 grains.
 Ammoniated mercury .. 48 grains.
 Zinc oxide..... 64 grains.
 White wax 64 grains.
 Spermaceti 192 grains.
 Olive oil 512 grains.
 Oil rosemary 1 drop.

3018. Eye Wash.

Borate sodium 3 grains.
 Rose water 1 ounce.
 Water 1 ounce.
 Apply beneath lids three or four times
 daily, after cleansing.

3019. Eye Wash, Alum.

Alum 1 grain.
 Pure water 1 ounce.
 Drop gently night and morning into the
 eye with the tip of a feather, a pipette, or
 some such thing, and this will sensibly
 relieve inflammation.

3020. Eye Wash, Brandy.

Brandy 1 dram.
 Water 1 ounce.
 To be used for eyes irritable from cold.
 Apply frequently.

3021. Eye Wash, Cocaine.

Cocaine muriate 4 grains.
 Boracic acid 15 grains.
 Distilled water 2 ounces.
 Drop into the eye.

3022. Eye Wash, Witch Hazel.

Distilled witch hazel..... 1 ounce.
 Pure water 1 ounce.
 To be used especially for eyes irritable
 from cold. Bathe the eyes frequently with
 the wash.

3023. Eye Wash, Zinc.

Sulphate of zinc..... 1 grain.
 Rose water..... 1 ounce.
 Drop the solution gently into the eyes
 night and morning. For inflamed eyes.

3024. Eye Water.

Sulphate of copper, 10 grains; camphor
 mixture (julep), ½ pint; dissolve. In the
 purulent ophthalmia of infants.

3025. Eye Water.

Distilled vinegar, 1 fluid ounce; distilled water, $\frac{1}{2}$ pint. Half a fluid ounce of rectified spirit, or 1 fluid ounce of brandy, is often added. In simple chronic ophthalmia, blear eyes, etc., also to remove particles of lime from the eyes.

3026. Eye Water.

Sugar of lead, 10 grains; pure vinegar, $\frac{1}{2}$ teaspoonful; distilled water, $\frac{1}{2}$ pint. In ophthalmia, as soon as active inflammation ceases: also as the last.

3027. Eye Water.

Wine of opium, 2 fluid drams; sulphate of zinc, 20 grains; distilled water, $\frac{1}{2}$ pint. Astringent and anodyne; in painful ophthalmia and extreme irritability.

3028. Eye Water.

Opium, 15 grains; boiling water, 8 fluid ounces; when cold, add of solution of acetate of ammonia, $2\frac{1}{2}$ fluid ounces, and filter.

3029. Eye Water.

Sulphate of zinc, 20 grains; distilled water, $\frac{1}{2}$ pint; dissolve. An excellent astringent water in chronic ophthalmia, weak and irritable eyes, etc.

3030. Eye Water.

Sodium borate..... 10 grains.
Camphor water..... 2 drams.
Mucilage of quince seed... $\frac{1}{2}$ ounce.
Distilled water..... $\frac{1}{2}$ ounce.

Put a few drops in the eye three or four times a day.

3031. Eye Water Tannic Acid.

Tannic acid..... 0.5
Cherry laurel water..... 10.0
Distilled water..... 50.0

As an application in catarrhal conditions of the conjunctiva.

3032. Sty.

Boracic acid, powdered.... 30 grams.
Distilled water..... 300 grams.

Mix. Wet a piece of wadding and drop some of this solution on the sty several times a day.

3033. Paint for Black Eyes.

Bismuth, 2 parts; talc, 1 part; color with carmine to skin tint. Wash the part with mixture of glycerine, 1 part; water, 5 parts; dry and apply powder.

3034. Eye Black, How to Care for.

Immediately after the eye has been struck with force enough to make it black, apply a cloth wet with water just as hot as can be borne; keep on applying the water for 15 or 20 minutes, and the coagulated blood will become thin and pass off into its natural channels and leave the eye perhaps swollen, but clear of blackness.

GOUT AND RHEUMATISM.**3035. Rheumatism.**

Wine colchicum seed..... $\frac{1}{2}$ ounce.
Tincture digitalis..... 2 drams.
Solution potassium citrate..... $2\frac{1}{2}$ ounces.
A teaspoonful in water every six hours.

3036. Rheumatism.

Wine colchicum root..... 1 ounce.
Sulphate magnesium..... 1 ounce.
Magnesia 2 drams.
Peppermint water..... 10 ounces.

3037. Rheumatism.

Salicylic acid..... 8 ounces.
Bicarbonate of soda..... $5\frac{1}{2}$ ounces.
Nitrate of potassium..... 3 ounces.
Tincture colchicum seed.. 8 ounces.
Oil of wintergreen..... 2 drams.
Sugar house syrup..... 2 pints.
Alcohol 2 pints.
Water q. s..... 1 gallon.

Mix the salicylic acid with the water in a gallon bottle and gradually add the bicarbonate soda, waiting after addition until effervescence ceases before adding more. When all has been added and dissolved (which will require about 2 hours), add the alcohol, in which the oil of wintergreen has been previously dissolved. Then the tincture of colchicum seed and syrup, lastly the nitrate of potassium, allowing to stand until the latter is dissolved; then filter. Dose for an adult, a dessertspoonful 3 times a day.

3038. Rheumatism.

Acid salicylic..... 2 drams.
Solution ammonium acetate 2 ounces.
Distilled water..... 3 ounces.
Syrup orange peel..... 1 ounce.

A tablespoonful at a dose, in water, every 2 hours.

3039. Alterative, Rheumatic.

Colchicum seed and black cohosh root, of each $\frac{1}{2}$ ounce, the root to be bruised; best rye whisky, 1 pint; put it together and let it stand for 3 or 4 days. Dose, from 1 teaspoonful to a tablespoonful 3 times daily before meals.

3040. Rheumatic Liniment.

Olive oil, spirits of camphor and chloroform, of each 2 ounces; oil of sassafras, 1 teaspoonful. First add the oil of sassafras to the olive oil, then the spirits of camphor, and shake well before putting in the chloroform, shaking when used, and keeping it corked, as the chloroform evaporates quickly if left open. Apply 3 or 4 times daily, rubbing it in well and always towards the body.

3041. Rheumatic Drops No. 6, Thompsonian.

Capsicum 1 ounce.
Myrrh 1 pound.
Alcohol 1 gallon.

3042. Rheumatic Lightning.

Fluid extract colchicum
seed..... 64 minims.
Fluid extract cimicifuga. 256 minims.
Acetate of potash..... 128 grains.
Salicylate of soda..... 256 grains.
Alcohol, of 15 per cent,
q. s. to..... 1 pint.

3043. Alkaline Liniment for Rheumatism.

Olive oil..... 5 ounces.
Chloroform 2 ounces.
Ammonia 6 drams.
Tincture of aconite root.... 2 drams.

This is applied to inflamed joints sufficiently often to relieve pain, bromide of potassium being given at night to secure rest.

3044. Squire's Rheumatic Liniment.

Alcohol 1 pint.
Oil sassafras 2 ounces.
Oil origanum..... 2 ounces.
Oil cloves..... 1 ounce.
Tincture capsicum..... 1 ounce.
Sulphate quinine..... 30 grains.
Spirits camphor..... 1 ounce.

Mix.

3045. Lithiated Potash Water.

Lithium bicarbonate..... 13 grains.
Magnesium bicarbonate... 10 grains.
Potassium bicarbonate.... 16 grains.
Sodium chloride..... 10 grains.
Carbonated water..... 16 ounces.

This quantity or more should be used daily.

3046. Aulde's Rheumatic Mixture.

Lithium bromide 1 ounce.
Solution potassium citrate. 4 ounces.
Syrup tolu 2 ounces.

A teaspoonful in plenty of water after each meal.

3047. Liquid Spice Plaster.

Capsicum 4 drams.
Cloves 4 drams.
Cinnamon 4 drams.
Ginger 4 drams.

Exhaust with stronger alcohol, evaporate to 4 ounces, and add to a solution of

Resin 9 ounces.
Venice turpentine..... 7 ounces.
Alcohol (95 per cent)..... 12 ounces.

Spread with a camel's hair brush on paper, cover with muslin, and apply in lumbago, muscular rheumatism, pain in chest, etc., over place of pain.

3048. Lallemand's Specific for Rheumatism.

Acetic extract colchicum. 15 grains.
Aqueous extract opium... 15 grains.
Potassium iodide..... 4 drams.
Potassium acetate..... 2 drams.
Distilled water..... 3½ ounces.
White wine..... ½ ounce.
Twenty drops three times daily.

3049. Spice Plaster.

Powdered capsicum..... 2 ounces.
Powdered cinnamon..... 2 ounces.
Powdered cloves..... 2 ounces.

Rye meal,

Spirits,

Honey, of each, sufficiency.

To be made into a cataplasm by trituration on a plate, and spread upon a close fabric. It should be made up extemporaneously when required.

3050. Rheumatic Pills.

Extract colocynth com-
pound 1½ grains.
Extract colchicum acetlc. 1 grain.
Extract hyoscyamus..... ½ grain.
Calomel ½ grain.

For 1 pill.

3051. Anti-Rheumatic Syrup.

Potassium iodide..... 5 parts.
Sodium salicylate..... 20 parts.
Syrup of opium..... 100 parts.
Syrup of bitter orange peel 300 parts.

Mix and dissolve. Dose for adults, a tablespoonful three or four times in 24 hours.

3052. Gouty Rheumatism.

Wine colchicum seed..... ½ dram.
Potassium acetate 5 drams.
Potassium iodide 5 drams.
Tincture black cohosh... 5 drams.
Peppermint water, enough
to make..... 4 fl. ounces.
Teaspoonful every four hours.

3053. Gout and Rheumatic Mixture.

Sallein 80 grains.
Colchicum wine..... 80 minims.
Acetate of potash..... 2 drams.
Tincture of cardamoms.. ½ ounce.
Chloroform water, to..... 6 ounces.

Make a mixture.

A sixth part of this to be taken at 12 noon and 4 p. m.

3054. Gout Liniment.

Oil wintergreen,
Olive oil,
Soap liniment,
Tincture aconite,
Tincture opium, of each, equal parts.

3055. Gout Liniment.

Ethereal tincture capsicum.. 1 ounce.
 Spirit ammonia..... 1 ounce.
 Oil turpentine..... 1 ounce.
 Oil linseed..... 1 ounce.

3056. Liniment for Chronic Gout.

Ethereal tincture capsicum. 1 ounce.
 Spirit of ammonia..... 1 ounce.
 Oil of turpentine..... 1 ounce.
 Oil of linseed..... 1 ounce.
 Tincture opium..... 1 ounce.
 Oil of sassafras..... 1 ounce.

3057. Gout Paper, Transparent.

Tissue paper is covered with a solution of 1 part amber-lac and 6 parts benzoin; when dry the following is applied:

Euphorbium 30 parts.
 Cantharides 15 parts.
 Stronger alcohol 300 parts.

Digest three days, filter, and add Venice turpentine, resin and pitch, of each 15 parts. If necessary, this solution may be diluted with more stronger alcohol; it should be applied with a broad brush.

3058. Gout Paper.

Cantharides 15 parts.
 Euphorbium 4 parts.
 Strong alcohol..... 240 parts.

Digest a few days, filter and add pitch, 180 parts. Dissolve with gentle heat and add Venice turpentine, 6 parts; and enough tar to color the mixture brown. This is spread two or three times on tissue paper by means of a sponge, and when dry the back of the paper is covered with oil of lavender.

3059. White's Gout Pills.

Calomel 1 dram.
 Powdered aloes, socotrine... 1 dram.
 Ipecac 1 dram.
 Acetic extract colchicum.... 1 dram.

Make a mass with syrup and form into 60 pills.

3060. Gout Powder.

Bryonia root..... 18 grams.
 Gentian 18 grams.
 Chamomile 10 grams.
 Colchicum root..... 20 grams.
 Betony 50 grams.

This is made into 365 powders, one of which is taken each day in a full glass of cold or hot water.

Internal medication for gout and rheumatism may be supplemented by active local measures, such as raising the affected limb and surrounding it with hot, moist flannels. Wrapping the hands in flannel dripping with water, and covering them with water-proof bag, is useful to dissolve gouty deposits, etc.

GARGLES, CROUP, DIPHTHERIA, GRIP, ETC.**3061. Gargle.**

Tincture capsicum..... 1 dram.
 Potassium chlorate..... 3 drams.
 Glycerine 16 drams.
 Acid hydrochloric dilute... 3 drams.
 Rose water, to make..... 12 ounces.

3062. Antidiphtheritic Gargle.

Benzoic acid..... 15 parts.
 Purified fusel oil (amylic alcohol)..... 50 parts.
 Alcohol 1,000 parts.

Mix, and add:

Cinnamon water..... 1,000 parts.

Add 1 tablespoonful to 2 tablespoonfuls of warm water.

3063. Antiseptic Gargle.

For sterilizing the mouth after the teeth have been cleaned with a tooth brush and soap:

Thymol 3½ grains.
 Benzoic acid..... 45 grains.
 Tincture of eucalyptus.. 180 grains.
 Water 11,250 grains.

3064. Bell's Gargle.

Borate of soda..... 2 drams.
 Yeast ½ ounce.
 Honey ½ ounce.
 Boiling water..... 7 ounces.

3065. Compound Potassium Chlorate Gargle.

Chlorate of potassium.... 1½ drams.
 Sulphate of aluminum.... 1½ drams.
 Glycerine 1 ounce.
 Dilute hydrochloric acid... 2 drams.
 Solution of hydrochlorate of morphine..... 8 ounces.

Dissolve the chlorate of potassium and alum in 4 ounces of water, add the other ingredients, and make up to 8 ounces with water. Use frequently. Astringent, antiseptic and sedative.

3066. Sage Gargle.

Infusion of sage..... 1 pint.
 Diluted sulphuric acid..... 2 drams.
 Honey of roses..... 1 ounce.
 Mix. In relaxation of the uvula, etc.

3067. Sage Gargle.

Infusion of sage..... 2 pints.
 Tincture of Peruvian bark ½ fl. ounce.
 Syrup of mulberries..... ½ fl. ounce.
 Spirit of horseradish..... 1 dram.
 More active than the last.

3068. Gargle Sage Compound.

Alum 4 drams.
 Sage 1 ounce.
 Honey 2 ounces.
 Boiling water..... 1 pint.

Make an infusion and strain, dilute with water and use as a gargle.

3069 Sage Water Concentrated.

Sage 5 parts.
 Water, sufficient.

Macerate and distill 5 parts.

Sage water is made by diluting 1 part of this with 9 parts of distilled water.

3070. Gargle for Sore Throat.

Ammoniated tincture of
 guaiac..... 3 drams.
 Solution of potassa..... 3 drams.
 Tincture opium..... 2 drams.
 Cinnamon water, enough to
 make..... 8 ounces.

To be used every hour.

3071. Diphtheria.

Camphor 5 drams.
 Castor oil..... 4 drams.
 Alcohol 2½ drams.
 Phenic acid (crystals)... 4 scruples.
 Tartaric acid..... 16 grains.

Apply locally.

3072. Diphtheria.

Spirits turpentine..... 1 dram.
 Potassium chlorate..... 2 drams.
 Simple syrup..... ½ ounce.
 Water distilled..... 2 ounces.

Mix and add:

Muriated tincture iron.... ½ ounce.
 Muriatic acid..... 1 dram.

Dose, ½ to 1 teaspoonful every 2 or 3 hours, in a little water; swallow slowly.

3073. Diphtheria and Croup.

Pilocarpine ¼ grain.
 Ammonium carbonate..... 30 grains.
 Potassium chlorate..... 45 grains.
 Syrup polygala..... 1 fl. ounce.
 Cognac 5 fl. drams.
 Water 5 fl. ounces.

A spoonful every hour until the patient begins to perspire.

3074. Laryngeal Diphtheria.

Oil turpentine..... 1 ounce.
 Oil eucalyptus..... 1 ounce.
 Petrolatum 6 ounces.

Use in a steam atomizer every half hour.

3075. Menthol in Diphtheria.

Menthol rubbed up with sugar, 1 to 20 or 1 to 10. Apply with a large camel's hair brush, the membrane being as far as possible rubbed off, and the menthol brought

directly in contact with the underlying surface. Solutions do not answer so well, as the membrane cannot be so completely rubbed off as with the powder. Apply 3 or 4 times daily.

3076.**Croup.**

Mucilage acacia..... 2 ounces.
 Balsam copaiba..... 1 dram.
 Fluid extract ipecac..... 1 dram.
 Potassium iodide..... 1 dram.
 Powdered potassium chlo-
 rate..... 1 dram.

3077.**Croup.**

Syrup ipecac..... 9 drams.
 Compound syrup squills... 1½ ounces.
 Camphorated tincture opi-
 um..... 2 ounces.

Dose, half teaspoonful every 3 or 4 hours.

3078.**Protracted Croup.**

Potassium iodide..... 2½ drams.
 Tincture bloodroot..... 4 drams.
 Syrup squills, compound.. 1½ ounces.
 Camphorated tincture opi-
 um..... 2 ounces.

Teaspoonful every 4 hours.

3079. Spray Solution for Croup.

Sodium bicarbonate..... 120 grains.
 Sodium borate..... 120 grains.
 Water 2 ounces.

Use in an atomizer.

3080. Sore Mouth in Children.

Chlorate of potash..... 30 grains.
 Honey 2 drams.
 Water enough to make... 2 ounces.

Mix. Wash the mouth several times a day, using a soft rag.

3081. Mucus Patches in the Mouth.

Boric acid..... 2 drams.
 Glycerine 2 ounces.
 Tincture myrrh..... 1 ounce.
 Rose water, to..... 8 ounces.

As a gargle.

3082. Mucus Patches in the Mouth.

Borax 1½ drams.
 Sodium bicarbonate..... 30 grains.
 Thymol 3 grains.
 Glycerine 1 ounce.
 Cherry laurel water, to.. 4 ounces.

Use as a gargle.

3083.**La Grippe.**

Salol 3 scruples.
 Phenacetine 2 scruples.
 Quinine salicylate..... 1 scruple.

Make in 20 capsules, 2 to be taken every 3 hours.

3084.**La Grippe.**

Quinine salicylate..... 1 grain.
 Extract belladonna..... 1-33 grain.
 Arsenious acid..... 1-125 grain.

VERMIFUGES.

3085. Worm Cakes (Storey's).

Take of calomel and cinnabar, of each 24 grains; powdered jalap, 72 grains; ginger, 1 dram; white sugar, 1½ ounces; syrup, quantity sufficient; mix and divide into a dozen cakes.

3086. Injection for Seat Worms.

For children:

Olive oil 40 to 60 grams.

Naphthalin 1 to 1.5 grams.

To be repeated for eight days.

3087. Injection for Seat Worms.

For adults:

Olive oil 60 to 80 grams.

Naphthalin 5 to 6 grams.

3088. Worm Powders, Collier.

Powdered jalap and scammony, of each 1 dram; cream tartar, 2 drams; Ethiops' mineral, 3 drams.

3089. Worm Powders.

Santonin 10 grains.

Calomel 15 grains.

Scammony, resin, powdered 15 grains.

Powdered sugar 30 grains.

Mix, and divide into 15 powders. Give one 3 times daily (on an empty stomach) for one day and repeat in 3 days if necessary.

3090. Worm Powders.

Santonin 10 grains.

Podophyllin resin 4 grains.

Powdered rhubarb 15 grains.

Sugar of milk 30 grains.

Mix, and divide into 15 powders. Give powders 5 hours apart (on an empty stomach), until 3 have been given.

Omit a day, repeating the dose if necessary.

3091. Worm Powders.

Calomel 3 grains.

Santonin ¼ grain.

Powdered rhubarb 5 grains.

For one powder.

3092. Compound Santonin Powder.

Santonin 10 grains.

Calomel 3 grains.

Resin jalap 1 grain.

For 3 or 6 powders.

3093. Ringworm.

Ammoniated mercury 1 dram.

Flowers sulphur 1 dram.

Vaseline 1 ounce.

Apply to parts affected once or twice a day.

3094. Ringworm.

Oil rose geranium 2 drops.

Borax 2 drams.

Glycerine 2 drams.

To be rubbed over the spot two or three times daily.

3095. Worm Syrup.

Oil chenopodium 1 fl. ounce.

Alcohol 1 fl. ounce.

Spirits ammonia aromatic ½ fl. ounce.

Essence gaultheria 2 drams.

Syrup rhubarb aromatic,

Simple syrup, equal parts,

to make 1 pint.

Dose:

Child 1 to 2 years ½ dram.

Child 2 to 4 years 1 dram.

Child 5 to 8 years 1½ drams.

Child 8, up 2 drams.

Three times a day, on an empty stomach, until 3 doses have been taken, then omit one day.

3096. Worm Syrup.

Fluid extract of spigelia.. 5 ounces.

Fluid extract of senna.... 3 ounces.

Oil anise 10 minims.

Oil caraway 10 minims.

Syrup 8 ounces.

Mix.

Dose: One or more teaspoonfuls at intervals until purging commences.

3097. Worm Syrup, for Thread Worms.

Santonin 60 grains.

Podophyllin 8 grains.

Oil peppermint 5 drops.

Aromatic spirits of am-

monia ½ fl. ounce.

Dilute alcohol 4 fl. ounces.

Dissolve and add a mixture of equal volumes of simple syrup and water to make 10 fluid ounces.

3098. Taenifuge for Children.

Male-fern extract 4 grams.

Calomel 0.3 to 0.4 grams.

Powdered gelatin,

Powdered sugar, of each, quantity sufficient.

For one electuary. To be taken before breakfast.

The day preceding the administration the child should take nothing but milk; in the evening of the same day an emetic of senna infusion is given, followed a few hours later by an injection of plain water. The next day the child takes the confection. If the expulsion of the worm is tardy, a salt water clyster is given (salt, 40 grams; water, 200 grams) two or three hours after the ingestion of the taenifuge.

3099. Tape Worm Remedy.

Oleoresin male fern..... 45 minims.
Tincture vanilla..... 45 minims.
Powdered acacia..... ½ dram.
Distilled water..... 1 ounce.

Take the entire amount after fasting, and follow in two hours by full dose of castor oil or sulphate of magnesium.

3100. Tape Worm Remedy.

Pomegranate, bark of root.. 4 ounces.

Make infusion in 8 ounces water by allowing to stand 3 hours. Strain and evaporate to 3 ounces.

Add this solution to the following:

Croton oil 1 drop.
Ether 1 dram.
Oleoresin male fern..... 2 drams.
Honey 1½ ounces.

Feed patient on pumpkin seed and lemon juice for 3 or 4 days, then give the above mixture in 3 doses, 15 minutes between each dose. In about an hour give dose of castor oil.

3101. Mosler's Tape Worm Bolus.

Kousso flower 30 grams.
Kamala 15 grams.
Oleoresin of male fern..... 4 grams.
Honey, quantity sufficient.

Mix and divide into 60 boluses, which may be sprinkled over with powdered cinnamon, and of which 30 should be taken in the evening and 10 or 20 more the following morning.

3102. Worm Tea.

Spigelia 4 drams.
Senna 3 drams.
Aniseed 1 dram.
Boiling water..... 16 ounces.

Infuse for an hour. Dose, from 1 to 2 tablespoonfuls every 3 hours.

3103. Worm Tea.

Spigelia 240 grains.
Manna 240 grains.
Senna 120 grains.
Fennel 60 grains.

Cut the spigelia and mix with the other ingredients; infuse in 16 fluid ounces of boiling water. Give a child, 2 years old or upwards, half a teacupful, warm, morning, noon and night, before eating.

3104. Worm Tea.

Senna ½ ounce.
Manna ½ ounce.
Spigelia ½ ounce.
Fennel seed..... 1 dram.
Wormseed ½ dram.
Savine 2 scruples.
Bitartrate of potassium... 2 scruples.

Make into 1 package.

Directions: Pour on to this 1 quart of

boiling water, and let digest for 10 or 15 minutes; of the clear liquor, sweetened, give to children 2 years old and upwards a small teacupful, warm, morning, noon and night, on an empty stomach. It may be given 3 or 4 days successively, if necessary.

3105. Vermifuge.

Alexandria senna..... 1 pound.
Pink root..... 2 pounds.
Potassium carbonate..... 1 ounce.
Santonin 3 ounces.
Oil of caraway..... 1½ drams.
Oil of anise..... 1½ drams.
White sugar..... 6 pounds.
Alcohol 1 pint.
Water enough to make.... 1 gallon.

3106. Santonin Chocolate Pastilles.

Dissolve 2 grams santonin in 20 grams cacao butter, and add 78 grams of chocolate in paste (180 degrees F.), and divide into 100 gram pastilles. These pastilles are simply massed with the chocolate in a warm mortar, similar to the process employed in agitating a pill mass, but the heat must not be allowed to rise above 100 degrees F., for a high temperature spoils the chocolate. The formula for santonin paste can be modified by substituting castor oil for the cacao butter, using 2 grams santonin, 10 grams oil, 80 grams chocolate paste, and 5 grams vanilla sugar for flavoring and to disguise the oil.

3107. Troches Santonin.

Santonin, in fine powder..... ½ troy ounce.
Sugar, in fine powder.. 18 troy ounces.
Tragacanth, in fine powder..... ½ troy ounce.
Orange flower water, a sufficient quantity.

Rub the powders together until they are thoroughly mixed, then with orange flower water form a mass, to be divided into 480 troches.

3108. Troches of Santoninate of Sodium.

Santoninate of sodium,
in fine powder..... 100 grains.
Sugar, in fine powder.... 2,000 grains.
Tragacanth, in fine powder..... 50 grains.
Orange flower water, a sufficient quantity.

Rub the powders together until they are thoroughly mixed; then with the orange flower water form a mass, to be divided into 100 troches. When intended for domestic use, the lozenges of both santonin and santoninate of sodium are often made to contain less of the drug than is directed in the foregoing formulas; and the mass is

mixed with white of egg, colored pink with cochineal mixture, and squeezed from a horn so as to form "drops" like the comfits of the confectioner. The lozenges should not be exposed to the light.

3109. Vermifuge Lozenges.

Santonin, 60 grains; pulverized sugar, 5 ounces; mucilage of gum tragacanth, sufficient to make into a thick paste, worked carefully together, that the santonin shall be evenly mixed throughout the whole mass; then cover up the mortar and let stand from 12 to 24 hours to temper; at which time they will roll out better than if done immediately; divide into 120 lozenges. Dose for a child, 1 year old, 1 lozenge night and morning; of 2 years, 2 lozenges; of 4 years, 3; of 8 years, 4; of 10 years or more, 5 to 7 lozenges; in all cases to be taken twice daily, and continuing until the worms start.

3110. Pediculi Pubis, or "Crabs."

Dilute acetic acid..... 500 parts.

Corrosive sublimate..... 1 part.

Mix. The poisonous nature of the wash must not be forgotten.

3111. Soldiers' Salve for Pediculi.

White precipitate..... 15

Wax ointment..... 150

Lard 150

Carbolic acid..... 5

Oil cloves..... 5

Oil bergamot..... 5

Mix thoroughly. For head and body lice, scabies, etc.

DIARRHOEA, DYSENTERY, ETC.

3112. Blackberry Balsam.

Rose leaves..... 2 drams.

Cloves 1½ drams.

Cinnamon 1½ drams.

Mace 1 dram.

Alcohol 4 ounces.

Water 12 ounces.

Percolate until 1 pint is obtained, and add:

Fluid extract of blackberry

root..... 2 ounces.

Sugar 20 ounces.

3113. Blackberry Cordial.

Blackberry juice..... 3 pints.

Cinnamon, coarse powder..... 2 troy ounces.

Cloves, coarse powder. ½ troy ounce.

Nutmegs ½ troy ounce.

Diluted alcohol..... 2 pints.

Syrup 3 pints.

Percolate the powdered spices with diluted alcohol to obtain 2 pints of tincture,

and add this to the 3 pints of blackberry juice, then add 120 grains of purified talcum, set the mixture aside for 12 hours, or longer if convenient, occasionally shaking, then filter, to the filtrate add the syrup.

3114. Confection Acorns.

Powdered acorns..... 3 ounces.

Powdered red coral..... 1½ ounces.

Powdered catechu..... 1½ ounces.

Confection of dog rose.... 10 ounces.

Syrup of red roses, sufficient.

Mlx. One dram every four hours, in chronic diarrhoea.

3115. Diarrhoea Cordial.

Fluid extract ipecac..... 2 drams.

Tincture opium..... 1 ounce.

Tincture rhubarb, aromatic 1 ounce.

Tincture opium, camphor-

ated..... 1 ounce.

Syrup 1 ounce.

Alcohol 1 ounce.

Fluid extract logwood..... ½ ounce.

Fluid extract blackberry

root..... ½ ounce.

Dose, a teaspoonful every 3 hours.

3116. Neutralizing Cordial.

Rhubarb, coarsely powdered..... 2 ounces.

Carbonate of potassium.... 2 ounces.

Golden seal..... 1 ounce.

Cinnamon 1 ounce.

Sugar 4 pounds.

Brandy 1 gallon.

Oil of peppermint 20 minims.

Macerate the rhubarb, golden seal and cinnamon in half a gallon of the brandy for 6 hours at a gentle heat, transfer to a percolator and displace first with the remainder of the brandy, and afterward with enough water to complete 1 gallon of the percolate. To this add the carbonate of potassium, the sugar, and the oil of peppermint previously rubbed with enough sugar to absorb it. When the sugar is dissolved, filter through paper. The substitution of diluted alcohol for brandy to exhaust the drugs affords a preparation less pleasant, but less expensive and quite as efficient.

3117. Chronic Diarrhoea.

Lactic acid..... 10 grams.

Syrup 200 grams.

Water 800 grams.

3118. Lozenges for Diarrhoea, Cholera, Etc.

Pure carbolic acid, 1 part; white bismuth, 20 parts; compound powder of chalk with opium, 40 parts; powdered tragacanth, 6 parts; oil of cinnamon, 1 part; tincture of cayenne, 3 parts; syrup, q. s. Mass, and

divide into picces, each to weigh 20 grains; bake with a gentle heat. Dose, one every 2, 3 or 4 hours, according to urgency of the symptoms.

3119. Diarrhoea Mixture

Tincture capsicum..... 1 fl. dram.
Spirits peppermint..... 2 fl. drams.
Tincture opium..... 3 fl. drams.
Tincture catechu com-
pound..... 4 fl. drams.
Tincture kino..... 4 fl. drams.
Tincture krameria..... 4 fl. drams.
Spirits camphor..... 4 fl. drams.
Water 4 fl. drams.
Dose, 30 to 60 minims.

3120. Diarrhoea Mixture, Acid.

Acid sulphuric aromatic. 2 fl. drams.
Tincture opium 2 fl. drams.
Water, quantity sufficient
to 3 fl. ounces.
Dose: A fluid dram every four hours in
water.

3121. Aromatic Mixture (for Infants).

Aromatic confection..... 2 drams.
Carbonate of magnesia.... 24 grains.
Tincture rhubarb..... 2 fl. drams.
Peppermint water, to
make 3 fl. ounces.
Carminative, antacid and stomachic.
Dose, $\frac{1}{2}$ to 2 teaspoonfuls, according to
age, three or four times daily.

3122. Dunlap's Diarrhoea Mixture.

Tincture opium..... $\frac{1}{2}$ ounce.
Tincture camphor $\frac{1}{2}$ ounce.
Tincture peppermint..... 3 ounces.
Tincture ginger..... 3 ounces.
Tincture capsicum..... $\frac{1}{2}$ ounce.
Hoffman's anodyne..... $\frac{1}{2}$ ounce.
Dose, a teaspoonful diluted with sweet-
ened water, after each motion. This is
particularly recommended for cholera
morbus.

3123. Diarrhoea Pills.

Tannic acid..... .06 gram.
Powdered opium..... .02 gram.
White sugar..... .5 gram.
For 1 powder. Take one every two hours.

2124. Diarrhoea Syrup.

Powdered gum ara-
bic 15 grams.
Distilled cinnamon
water 15 grams.
Distilled mint water 10 grams.
Syrup of quinces.... 20 grams.
Extract of opium.... 5 to 10 centigrams.
It is mixed with a half a tumbler of
water when wanted for use, and of the
mixture a tablespoonful taken every hour.

2125. Summer Diarrhoea.

Zinc oxide 1 dram.
Sodium bicarbonate $\frac{1}{2}$ dram.
Tincture krameria..... $\frac{1}{2}$ dram.
Syrup chloroform..... 3 drams.
Water 2 ounces.
Tablespoonful every half hour.

3126. Syrup Blackberry.

Syrup $\frac{1}{2}$ gallon.
Essence of blackberry.... 4 ounces.

3127. Compound Syrup of Black- berry Root.

Blackberry root, bruised 8 troy ounces.
Cinnamon 3 drams.
Cloves 3 drams.
Nutmegs 3 drams.
Sugar 4 pounds.
Water 4 pints.
Boil the root and the aromatics in the
water for one hour; express and strain;
then add the sugar, form a syrup, and
again strain; then add:
French brandy 6 fl. ounces.
Oil of cloves..... 4 drops.
Oil of cinnamon 4 drops.
Dose, a teaspoonful for a child 2 years
old, to a tablespoonful for an adult, as oc-
casion requires.

3128. Gripe Tincture. Tincture of Pimento.

Ground pimento, 1 pound; rectified spirit
and soft water, of each 3 pints; digest for
some days and strain; give 4 fluid ounces
at once, and repeat every hour till relieved.

3129. Antidysentery Pills.

Ipecac 0.4
Calomel 0.2
Extract opium..... 0.5
Syrup, quantity sufficient.
Make into 6 pills.

3130. Mixture of Extract of Cascarilla.

Extract of cascarilla..... 1 dram.
White sugar 6 drams.
Oil of chamomile..... 20 drops.
Tragacanth $\frac{1}{2}$ dram.
Wine of opium..... 25 drops.
Cinnamon water..... 2 fl. ounces.
Peppermint water..... 4 fl. ounces.
Mix. A spoonful every hour in dysen-
tery.

3131. Cholera Morbus.

Oil cinnamon..... 10 drops.
Chloroform 6 drams.
Tincture opium 6 drams.
Tincture camphor..... 6 drams.
Spirits ammonia aromatic 6 drams.
Whisky $1\frac{1}{2}$ ounces.
One-half to one teaspoonful at a dose.

3132. Colic, Flatulent.

Camphor water 1 ounce.
 Spirit ether compound..... 2 ounces.
 Tincture cardamom com-
 pound 4 drams.
 Spirit anise..... 6 drams.
 Syrup ginger..... 2 drams.
 Peppermint water..... 1½ ounces.
 Dose, 1 ounce when flatulence is trouble-
 some.

**3133. Colic in Infants.
(No Opium.)**

Sodium bicarbonate..... 8 grains.
 Oil anise..... 8 minims.
 Mucilage acacia..... ½ ounce.
 Peppermint water, quan-
 tity sufficient..... 2 ounces.
 Dose, 1 dram every half hour. Very
 prompt; usually only two or three doses
 required.

**LOZENGES, TROCHES, PAS-
TILLES, TABLETS, ETC.****3134. Charcoal Lozenges.**

Powdered charcoal..... 1 ounce.
 Powdered sugar..... 1 ounce.
 Powdered vanilla..... 1 dram.
 Powdered chocolate..... 3 ounces.
 Mucilage of tragacanth, sufficient.
 Beat together, and form lozenges of 18
 grains. For fetid breath.

3135. Complexion Lozenges.

Milk of sulphur..... 5 grains.
 Podophyllin 1-6 grain.
 Cream of tartar..... 1 grain.
 Make into a tablet. One tablet should be
 taken every night and morning.

3136. Anodyne Cough Lozenges.

Extract of white poppies.. 4 ounces.
 Extract of licorice..... 4 ounces.
 Powdered acacia..... 4 ounces.
 White sugar..... 1 pound.
 Mix together, making into a lozenge paste
 with distilled water. Divide into 10-grain
 lozenges and dry. One of these lozenges
 may be taken every four hours.

3137. Cough Lozenges.

Extract of blood root, licorice and black
 cohosh, of each 1-4 of an ounce; tinctures
 of ipecac and lobelia, with laudanum, of
 each 1-4 of an ounce; cayenne, powdered,
 10 grains; pulverized gum arabic and starch,
 of each ¾ of an ounce; mix all together and
 add pulverized sugar, 3 ounces. If this
 should be too dry to roll into lozenges, add

a thick solution of gum arabic to give it
 that consistence; and if it should be yet
 too moist, at any time, add more sugar.
 Divide into 320 lozenges. Dose, 1 lozenge
 three to six times daily, as needed.

3138. Gum Lozenges.

Powdered gum arabic..... 1 ounce.
 Powdered sugar..... 9 ounces.
 Orange flower water..... 6 drams.
 Mix and form into lozenges weighing 15
 grains each. A useful article to allay ir-
 ritation of the throat in catarrh.

3139. Lactucarium Lozenges.

Powdered lactucarium..... 2 drams.
 Powdered sugar..... 6 ounces.
 Powdered gum arabic..... 5 ounces.
 Powdered licorice..... 5 ounces.
 Tincture of tolu..... ½ ounce.
 Mix, and make lozenges of 10 grains.

3140. Pellitory Lozenges.

Powdered pellitory..... 1 dram.
 Powdered mastich 1 dram.
 Mucilage of tragacanth, sufficient.
 Mix, and make lozenges of 12 grains each.
 As a masticatory in toothache.

**3141. Antiseptic Pharyngeal Loz-
enges.**

Boric acid..... 35 grains.
 Benzoate of sodium..... 4 grains.
 Oil of thyme..... 4 minims.
 Borate of sodium..... 35 grains.
 Citric acid..... 20 grains.
 Oil of lemon..... 5 minims.
 Oil of peppermint..... 5 minims.
 Powdered acacia..... 2 drams.
 Powdered sugar..... 3½ troy ounces.
 Glycerine, q. s.
 Water, q. s.
 Gelatin, q. s.
 Make into 100 lozenges.

3142. Lozenges for Throat Dryness.

Fluid extract pyrethrum.. ¾ minlm.
 Pilocarpine hydrochlorate.. 1-32 grain.
 Extract licorice, pure..... 2 grains.
 Acacia 2 grains.
 Glycerine 1 minlm.
 Sugar enough to make.... 20 grains.
 The lozenges give great relief from the
 uncomfortable sensations of heat and dry-
 ness which characterize many acute and
 chronic affections of the mucus membrane
 of the throat and mouth, and one is used
 every 2, 3 or 4 hours, as necessary; but if
 used very freely, the quantity of pilocar-
 pine should be reduced. The addition of 2
 grains of ammonium chloride will often be

beneficial in sub-acute inflammatory conditions of the mucus lining of the respiratory tract, while in more chronic affections 2 or 3 minims of the oleoresin of cubebs will serve a good purpose.

3143. Starch Lozenges.

Starch $\frac{1}{2}$ ounce.
 Orris root..... $\frac{1}{2}$ ounce.
 Extract of licorice..... 1 ounce.
 Saffron $\frac{1}{2}$ ounce.
 White sugar..... 1 pound.
 Mix, and form into lozenges.

3144. Starch Lozenges.

Starch 1 ounce.
 Gum arabic..... 2 ounces.
 White sugar..... 1 pound.
 Benzoic acid..... $\frac{1}{2}$ dram.
 Rose water, sufficient to form a paste.
 To be divided into lozenges.

3145. Voice Lozenge.

Cubebs $\frac{1}{2}$ grain.
 Benzoic acid..... $\frac{1}{3}$ grain.
 Hydrochlorate of cocaine..... 1-70 grain.
 Pulverized tragacanth..... $\frac{1}{4}$ grain.
 Extract of licorice..... 5 grains.
 Sugar 13 grains.
 Eucalyptol $\frac{1}{4}$ minim.
 Oil of anise..... 1-20 minim.
 Black currant paste,
 enough to make..... 20 grains.

A small piece of the lozenge is to be allowed to dissolve in the mouth just before using the voice for singing or speaking.

3146. Blood Root Troches.

Powdered blood root..... $\frac{1}{2}$ ounce.
 Powdered extract of licorice..... 8 ounces.
 Tincture of tolu..... 1 ounce.
 Syrup of tolu, q. s.
 Mix, and make into 480 troches.

3147. Troches Lactates of Sodium and Magnesium With Pepsin. (Digestive Pastilles.)

Magnesium lactate..... 3.3
 Sodium lactate..... 3.3
 Sugar 90.0
 Pepsin, pure..... 3.0
 Tragacanth 0.4
 Water, q. s.

Divide into 100 troches.

3148. Licorice Troches, Black.

Orris root..... 2 grams.
 Star anise..... 8 grams.
 Extract licorice..... 140 grams.
 Sugar 140 grams.
 Pulverize, and mix with
 Mucilage acacia, q. s.
 Form into troches weighing 0.5 gram.

3149. Anti-Asthmatic Pastilles.

Tincture iodine..... 30 minims.
 Powdered stramonium... 3 ounces.
 Powdered lobelia..... 3 ounces.
 Powdered cubeb..... 6 drams.
 Powdered sage..... $1\frac{1}{2}$ ounces.
 Potassium nitrate..... 3 ounces.
 Mucilage acacia, q. s.

To the well-mixed powders add the tincture of iodine and incorporate thoroughly; then add sufficient mucilage to make a stiff paste, which roll out flat and cut into small, oblong pieces.

3150. Stomach Pastilles.

Galangal root..... 15 parts.
 Aromatic powder..... 5 parts.
 Vanilla sugar..... 5 parts.
 Red saunders..... $2\frac{1}{2}$ parts.
 White sugar..... 120 parts.
 Cacao mass..... 50 parts.
 Tragacanth $\frac{1}{2}$ part.

Reduce to a very fine powder, and thoroughly mix, and then make into a mass with orange flower water and divide into 200 pastilles.

3151. Pectoral Tablets With Ammonium Chloride.

Purified extract licorice.. 100.0 grams.
 Sugar 25.0 grams.
 Ammonium chloride..... 12.5 grams.
 Glycerine 6.0 grams.
 Tragacanth 5.0 grams.
 Powdered licorice, quantity sufficient.

Mix and make into a mass; form into tablets.

3152. Iceland Moss Paste.

Iceland moss 2 ounces.
 Gum arabic 10 ounces.
 Sugar 8 ounces.
 Water, sufficient quantity.

Wash the Iceland moss in boiling water, and having rejected this, boil it in an additional portion of water for an hour. Express and strain, add the gum and sugar, and evaporate till a drop does not adhere to the back of the hand, then cool it on a marble slab.

3153. Marshmallow Paste (Opaque Gum Paste).

Gum arabic, white..... 1 pound.
 Sugar 1 pound.
 Water, sufficient quantity.
 Orange flower water..... 3 ounces.
 White of eggs..... 10

Contuse the gum, dissolve it in the water, and strain; put the gummy solution on the fire in a deep wide pan, add the sugar, stirring it constantly till it has the consistence of thick honey, carefully regulating the heat. Then beat the eggs to a froth, add them and the orange water to the

paste gradually, which must be stirred constantly; continue to beat the paste until a small portion placed in the hand no longer adheres to it, then pour it on a slab or in pans dusted with starch.

3154. Medicated Secrets, or Cough Candy.

To 10 pounds of candy add the following, and divide into secrets:

Tincture of squill.....	4 fl. ounces.
Tincture of tolu.....	½ ounce.
Camphorated tincture....	½ ounce.
Fluid extract ipecac.....	8 minims.
Oil gaultheria.....	8 minims.
Oil sassafras.....	6 minims.
Oil aniseed.....	3 minims.

Use as required, in ordinary coughs.

3155. Camphor Cough Drops.

Dutch crushed sugar.....	14 pounds.
Cream tartar	½ ounce.
Spirits camphor....	¼ ounce.
Tincture capsicum.....	¼ ounce.
Water	2 quarts.
Saffron coloring.	

Bring the sugar and water to a sharp boil, add the cream of tartar, and let the syrup boil up to strong crack degree. Drop in enough saffron to make the batch a bright golden tint. Pour the mass on an oiled slab, add the camphor and capsicum, work them well through the sugar, and pass the latter through tablet rollers.

LAXATIVES, PURGATIVES, CATHARTICS, ETC.

3156. Constipation in Children.

Castor oil.....	½ ounce.
Infusion coffee.....	2 ounces.
Powdered sugar.....	5 drams.
Yolk of egg, No. 1.	

Mix and emulsionize. Administer as usual in giving castor oil.

3157. Laxative Electuary for Children.

Manna	25 parts.
Calcined magnesia.....	50 parts.
Flowers of sulphur.....	50 parts.
Honey	120 parts.

Make into an electuary. One or two teaspoonfuls to be given in a cup of cold milk.

3158. Laxative Tea.

Buckthorn bark.....	4 ounces.
Dandelion root.....	4 ounces.
Senna leaves.....	4 ounces.
Licorice root.....	1 ounce.
Coriander seed.....	½ ounce.
Anise seed.....	½ ounce.

Reduce the drugs to a coarse powder and

mix uniformly. The cathartic effect of this remedy may be increased by introducing a proper quantity of coarsely ground rhubarb. The decoction or "tea" is made from the mixture by steeping one tablespoonful in about ¾ pint of hot water and allowing it to stand about thirty minutes. An adult dose of this is about a teacupful.

3159. Tonic Laxative.

Fluid extract cascara sa- grada	1 ounce.
Fluid extract nux vomica...	2 drams.
Compound tincture gentian, enough to make.....	4 ounces.
Dose, a teaspoonful.	

3160. Laxative Fruit Lozenges.

Aqueous extract senna (first deprived of its resin).....	40 parts.
Pulp of purging cassia.....	20 parts.
Pulp of tamarinds.....	5 parts.
Spanish extract licorice....	4 parts.
Resin scammony.....	4 parts.
Sugar (and tartaric acid)...	49 parts.

Mix into large oval lozenges of 82 grains each, which are dipped in melted chocolate and afterwards covered with a coating of pure cane sugar.

3161. Laxative Fruit Lozenges.

Powdered refined sugar....	600 parts.
Pulp of tamarinds.....	200 parts.
Powdered senna leaves....	100 parts.
Mucilage	70 parts.
Essence coriander	20 parts.
Essence lemon	10 parts.

3162. Laxative Fruit Lozenges.

Powdered sugar	300 parts.
Powdered vanilla choco- late	300 parts.
Calcined magnesia	300 parts.
Mucilage	70 parts.
Tincture vanilla	20 parts.
Essence cinnamon	10 parts.

3163. Castor Oil Syrup.

Castor oil	9 fl. drams.
Gum arabic	4 troy drams.
Mix, add	
Orange flower water....	9 fl. drams.
Make an emulsion, add	
Powdered sugar	1½ troy ounces.
Cinnamon water	½ fl. dram.
Mix, heat to boiling, skim and strain.	

3164. Castor Oil Syrup.

Castor oil	30.0
Orange flower water.....	20.0
Gum arabic	10.0
Make into an emulsion, then add	
Pulverized sugar	10.0
Simple syrup	50.0

3165. Cathartic Syrup.

Best senna leaf, 1 ounce; butternut, the inner bark of the root, dried and bruised, 2 ounces; peppermint leaf, 1 ounce; fennel seed, 1 ounce; alcohol, 1 pint; water, 2 pints; sugar, 2 pounds; put all into the spirits and water, except the sugar, and let it stand for 2 weeks, then strain, pressing out from the dregs, adding the sugar, and simmering a few minutes only, to form the syrup. If it should cause griping in any case, increase the fennel seed and peppermint leaf. Dose, 1 tablespoonful, once a day, or less often, if the bowels become too loose.

3166. Ideal Fruit Syrup.

Fluid extract cascara sagrada (tasteless)..... $1\frac{1}{2}$ fl. ounces.
 Fluid extract Oregon grape root..... 3 drams.
 Ground senna, No 20, powder 6 drams.
 Prunes 2 ozs. av.
 Figs 2 ozs. av.
 Oil of fennel.....10 minims.
 Oil of cinnamon.....10 minims.
 Oil of cloves..... 5 minims.
 Sugar 3 ounces.
 Water, enough to make.. 1 pint.

Chop the figs and prunes, without stones, to a fine hash, mix with senna and steep in 12 ounces of water for 3 hours, adding sufficient to replace the water of evaporation. Strain through a 40-wire sieve. To this liquid add the sugar, and dissolve. Add the fluid extract and oils, make up to 1 pint with hot water, which has been poured over the fruit on sieve.

Some may prefer to leave out the oils, and add instead:

Fluid extract licorice..... 4 fl. drams.
 Others may prefer, instead of the licorice:
 Powdered nutmeg..... 3 drams.
 Dose, 1 to 2 tablespoonfuls.

3167. Syrup of Tamarinds.

Tamarinds 1,000 parts.
 Sugar 5,000 parts.
 Orange flower water..... 60 parts.
 Water, a sufficient quantity.

Boll the tamarinds with a sufficient quantity of water for some time, express, and add sufficient of the decoction to the sugar to make a syrup. Clarify with the white of an egg, and when cold add the orange flower water.

3168. Syrup of Tamarinds.

Tamarind pulp..... 100 parts.
 Hot water..... 200 parts.
 White sugar..... 125 parts.

Digest the tamarind pulp with the hot water in a hot water bath for an hour,

then express gently and strain. To the liquid add the sugar, dissolve by the aid of heat and strain, and add sufficient water to bring the finished product up to 200 parts by weight.

3169. Laxative Powder of Jeannel.

Rochelle salts..... 50 parts.
 White sugar..... 100 parts.
 Bicarbonate of soda..... 22 parts.
 Tartaric acid, powdered.... 20 parts.
 Oil of lemon, sufficient quantity.

Dose, a teaspoonful in sweetened water.

3170. Compound Licorice Powder.

Licorice root, powdered..... 100
 Senna, powdered..... 100
 Fennel, powdered..... 50
 Sulphur, washed..... 50
 Sugar 300

3171. Compound Saline Powder.

Sulphate of potassium..... 3 ounces.
 Chloride of sodium..... 4 ounces.
 Sulphate of magnesium..... 4 ounces.

Dry the salts separately, with a gentle heat; then triturate them well together, and preserve in glass vessels. Aperient in doses of two or three drams, dissolved in half a pint of carbonic acid water. To be taken before breakfast.

3172. Seidlitz Powder (In One Bottle).

Potassio-tartrate of soda, 12 ounces; bicarbonate of soda, 4 ounces; tartaric acid, $3\frac{1}{2}$ ounces; white sugar, 1 pound (all in fine powder); dry separately by gentle heat, add essence of lemon, $\frac{1}{2}$ dram; mix well; pass the mixture through a sieve, and put it all at once in clean, dry bottles. A dessertspoonful or more to a tumblerful of water.

3173. Aperient, Magnesian Effervescent.

Sulphate of magnesia, 12 ounces; tartaric acid, 8 ounces; calcined magnesia, 3 ounces; pure sugar, 18 ounces; bicarbonate of soda, 6 ounces; essence of lemon, 30 drops. Dry the powders separately, mix and sieve them, then bottle securely. Two or three teaspoonfuls in water sufficient for a dose.

3174. Buckthorn Cordial.

Buckthorn bark 16 ounces av.
 Rochelle salts 8 ounces av.
 Senna leaves 8 ounces av.
 Licorice root 4 ounces av.
 Ginger root 2 ounces av.
 Sweet flag root..... 1 ounce av.
 Coriander seed 2 ounces av.
 Oil wintergreen 5 minims.
 Oil peppermint 10 minims.
 Diluted alcohol 5 pints.
 Sugar 2 pounds av.
 Water, a sufficient quantity.

3175. Palatable Castor Oil.

Treat the best grade castor oil with hot water repeatedly, then add enough saccharin to give it a syrupy taste. A minute quantity of the aldehyde of cinnamon oil and vanilla flavoring will cover any remaining disagreeable flavor. This process is said to impair neither the efficiency nor permanence of the oil.

3176. Palatable Castor Oil Mixture.

Castor oil	30 parts.
Bitter almonds	2 parts.
Sugar	30 parts.
Gum tragacanth	½ part.
Orange flower water.....	10 parts.
Water	120 parts.

Mix.

The only drawback to this mixture is that it requires a good deal of it for a dose, a teaspoonful of the oil being contained in about 5 teaspoonfuls of the mixture.

3177. Palatable Castor Oil Mixture.

Castor oil	1 dram.
Glycerine	1 dram.
Tincture orange.....	20 minims.
Tincture senega.....	5 minims.
Cinnamon water, quantity sufficient	½ ounce.

For one dose.

3178. Purgative Chocolate.

Cacao (powdered and freed from oil).....	50 grams.
Sugar (pulverized).....	100 grams.
Castor oil	50 grams.
Vanilla (pulverized), quantity sufficient	

Make into tablets. The oil should be incorporated with the cacao, and the sugar and vanilla added; the ingredients must be well worked up upon a heated slab and allowed to cool in molds.

3179. Purgative Coffee.

Magnesium sulphate.....	100 parts.
Mannite	60 parts.
Senna leaves	35 parts.
Roasted coffee	30 parts.
Jalap	3 parts.
Oleosaccharate anise	2 parts.

Mix. The dose for an adult is about 6 drams. When required for use put the mixture in a vessel, pour over it about 5 ounces of boiling water, and let infuse for fifteen minutes. Decant and administer warm or cold, as desired by patient.

An important factor in the treatment of constipation is, as a rule, regular and moderate exercise. As a means of temporarily relieving the condition, injections of glycerine or suppositories of glycerine or soap are said to be very effective.

HEMORRHOIDS, PILES, ETC.**3180. Ointment for Hemorrhoids.**

Antipyrin	2. grams.
Salol	2. grams.
Extract belladonna	0.10 grams.
Vaseline	15. grams.
Wax, quantity sufficient.	

A piece, the size of a nut, to be introduced within the anus thrice daily.

3181. Ointment for Hemorrhoids.

Pulverized opium.....	1.0
Glycerine	15 drops.
Thoroughly mix, then add a mixture of Yellow wax	30.0
Lard	50. grams.
Oil hyoscyamus	50. grams.

3182. Ointment for Hemorrhoids.

Tannin	20 grains.
Hydrochlorate cocaine.....	20 grains.
Sulphate morphine.....	5 grains.
Sulphate atropine.....	4 grains.
Vaseline	1 ounce.
Mix, and perfume with oil rose.	

3183. Ointment for Hemorrhoids.

Extract of belladonna....	15 grains.
Extract of thebia.....	15 grains.
Antipyrine	45 grains.
Mercury ointment	2½ drams.
Simple cerate	1 ounce.

This is to be made into an ointment and applied to the inflamed hemorrhoids. Rectal injections of warm water are to be employed if constipation is present.

3184. Astringent Ointment, Thompsonian.

Mutton suet	1 pound.
Melt, boil for half an hour with Witch hazel or sumac leaves	2 ounces.

3185. Posner's Haemorrhoidalpulver.

Jalap	10
Rhubarb	5
Lemon sugar.....	5
Purified tartar.....	90
Purified sulphur.....	90

Mix. Teaspoonful 3 times a day.

3186. Hemorrhoids.

Chrysarobin	1 grain.
Cacao butter.....	30 grains.
Iodoform	¼ grain.
Extract belladonna.....	1-10 grain.
Make into 1 suppository.	

3187. Nut Gall and Morphine Ointment.

Morphine 1 gram.
 Olive oil..... 72 grams.
 Zinc ointment..... 280 grams.
 Powdered nut-gall..... 36 grams.

Used in the treatment of painful hemorrhoids.

3188. Bleeding Piles.

Tannic acid..... 20 to 30 grains.
 Water 6 ounces.

To be injected, after being cooled with ice, into the rectum.

3189. Piles.

Injectations of tincture of hamamelis, 1 teaspoonful to the ounce of cold water, daily before rising. Also take internally 2 to 5 minims, 3 times daily.

3190. Piles.

As a hypodermic injection:

Carbolic acid..... 2 drams.
 Tannic acid..... 1 dram.
 Alcohol 4 drams.
 Glycerine 1 ounce.

3191. Pile Ointment.

Powdered nut-galls..... 60 grains.
 Powdered opium..... 30 grains.
 Goulard's cerate..... ½ ounce.
 Simple ointment..... ½ ounce.

Apply as required.

3192. Pile Ointment.

Acetate morphine..... 5 grains.
 Tannic acid..... ½ dram.
 Liniment subacetate of lead..... ½ fl. ounce.
 Simple ointment..... 7 drams.

Triturate the tannic acid with the liniment, and then mix all together.

3193. Pile Ointment.

Extract stramonium seeds.. 2 parts.
 Extract hyoscyamus..... 5 parts.
 Poplar ointment..... 90 parts.

3194. Pile Ointment.

Poplar ointment..... 90 grams.
 Litharge ointment..... 90 grams.
 Saffron in powder..... 6 grams.
 Crude opium..... 1 gram.
 Yolks of three eggs.

3195. Pile Ointment.

Chrysarobin 12 grains.
 Iodoform 5 grains.
 Extract belladonna..... 10 grains.
 Petrolatum 3 ounces.

3196. Pile Ointment.

Ointment of galls with opium 20 grains.
 Bismuth subnitrate..... 1 dram.
 Powdered opium 10 grains.
 Soft paraffin 1 ounce.

3197. Pile Ointment.

Gaïic acid 20 grains.
 Extract opium 10 grains.
 Extract belladonna 10 grains.
 Simple ointment 1 ounce.

Apply night and morning.

3198. Itching Piles.

Yellow oxide mercury..... 5 grains.
 Petrolatum 1 ounce.

Triturate the oxide of mercury with a few drops of alcohol until it becomes very smooth, then add the petrolatum.

3199. Pile Salve.

Saffron, powdered 1.0
 Camphor 1.0
 Oil hyoscyamus (infused)..... 7.5
 Lead ointment 20.0

3200. Pile Suppositories.

Iodoform 1 dram.
 Balsam Peru 2 drams.
 Oil theobroma..... 1½ drams.
 White wax 1½ drams.
 Magnesia calcined..... 1 dram.

Mix. Divide in 12 suppositories. One of these should be introduced after each evacuation.

3201. Itching Around the Bowel.

Camphor 1 dram.
 Cocaine 10 grains.
 Lanolin 3 drams.
 Ointment of benzoated oxide of zinc..... 3 drams.

Rub in well, whenever troubled with irritation and itching.

DYSPEPSIA, INDIGESTION, ETC.

3202. Dyspepsia.

Powdered capsicum 40 grains.
 Extract nux vomica..... 3 grains.
 Extract pancreas..... 1 dram.
 For 20 capsules, one after each meal.

3203. Flatulent Dyspepsia.

Salicylate bismuth..... 1 dram.
 Hubbard's magnesia..... 1 dram.
 Powdered willow charcoal 1½ drams.
 Oil anise 10 drops.

Mix and triturate thoroughly. Give nearly a teaspoonful ½ to 1 hour before each meal or right after eating.

3204. Anodyne in Dyspepsia.

Chloroform water..... 10 fl. ounces.
 Colombo syrup 2½ fl. ounces.
 Cannabis indica extract 2½ grains.

Tablespoonful every half hour until relieved.

3205. Huchard's Elixir for Gastric Dyspepsia.

Cocaine hydrochlorate.. 0.50 grams.
 Hydrochloric acid dilute 2.50 grams.
 Elixir garrus (or aromatic
 elixir, N. F.)..... 250.00 grams.
 Water 50.00 grams.

Dose, one tablespoonful after eating, for dyspepsia complicated with gastralgia.

3206. Anti-Dyspeptic Powder.

Subnitrate of bismuth,
 Magnesium carbonate,
 Prepared chalk,
 Phosphate of lime,
 Of each..... 2½ drams.

Mix, and divide into 40 papers. One paper to be taken at each meal, or whenever oppressed by gastrodynia or gastralgia due to super-acidity.

3207. Dyspepsia Tablets.

Pepsin 1 grain.
 Pancreatin 1 grain.
 Calcium lactophosphate.... 2 grains.

For one tablet.

3208. Dyspepsia Tablets.

Sugar 600 parts.
 Subnitrate bismuth..... 120 parts.
 Saccharated pepsin..... 90 parts.
 Pancreatin 90 parts.
 Mucilage 70 parts.
 Essence aromatic spices.... 30 parts.

3209. Indigestion.

Pepsin, saccharated..... 2 drams.
 Bismuth subcarbonate..... 2 drams.
 Powdered willow charcoal.. 2 drams.
 Sodium bromide..... 2 drams.
 Tincture nux vomica..... 1 dram.
 Tincture calumba..... 1 ounce.
 Peppermint water, enough
 to make..... 6 ounces.

A teaspoonful after meals.

3210. Indigestion.

Ammonium carbonate..... 40 grams.
 Magnesium sulphate..... 4 drams.
 Tincture of belladonna.... 1 dram.
 Tincture nux vomica..... 1 dram.
 Tincture ginger..... 1 dram.
 Spirits of chloroform..... 2 drams.
 Peppermint water, up to.. 6 ounces.

Mix. A tablespoonful every 4 hours.

3211. Digestive Pastilles of Borivent.

Bismuth subnitrate..... 20 parts.
 Phosphate of calcium.... 30 parts.
 Bicarbonate of sodium.... 10 parts.
 Carbonate of magnesium. 200 parts.
 Carbonate of iron..... 50 parts.
 Sugar 1,000 parts.

Flavor with oil peppermint, anise or orange flowers. Make pastilles of 1 gram each.

3212. Pastilles of Lactic Acid.

Lactic acid..... 10 grams.
 Powdered sugar..... 88 grams.
 Vanilla sugar..... 2 grams.
 Powdered tragacanth..... 1-10 gram.
 Water, q. s.

For 50 pastilles. Use 2 to 3 pastilles at a time for dyspepsia or sour stomach.

3213. Heartburn.

Acid carbolic..... 4 minims.
 Tincture iodine..... 16 minims.
 Tincture nux vomica..... 1 dram.
 Peppermint water..... 4 fl. ounces.
 One teaspoonful every 2 hours until relieved.

3214. Bismuth Powders.

Bismuth subnitrate..... 1 dram.
 Saccharated pepsin..... 1 dram.
 Cerium oxalate..... 15 grains.
 For 12 powders. Sometimes add:
 Morphine sulphate..... ½ grain.

3215. Soda Mint.

Sodium bicarbonate..... 1 ounce.
 Aromatic spirits ammonia.. 1 ounce.
 Spearmint water..... 2 ounces.
 One or two tablespoonfuls for an adult;
 ½ to 2 teaspoonfuls for an infant.

3216. Soda Mint, Liquid.

Sodium bicarbonate..... 2 drams.
 Aromatic spirit ammonia.. ½ fl. ounce.
 Peppermint water, enough
 to make..... 8 fl. ounces.
 Dose, 1 teaspoonful.

3217. Soda Mint, Liquid.

Sodium bicarbonate..... 2 drams.
 Sugar 2 drams.
 Aromatic spirit ammonia. 15 minims.
 Peppermint water, enough
 to make..... 8 fl. ounces.
 Dose, 1 tablespoonful.

3218. Soda Mint, Liquid.

Sodium bicarbonate..... 2 ounces.
 Sugar ½ ounce.
 Camphor water..... 6 ounces.
 Peppermint water, enough
 to make..... 2 pints.

3219. Soda Mint, Liquid.

Sodium bicarbonate..... 2 ounces.
 Glycerine 4 fl. ounces.
 Aromatic spirit ammonia.. 1 fl. ounce.
 Spearmint water..... 2 pints.
 Peppermint water..... 2 pints.
 Mix and filter.

3220. Soda Mint, Liquid.

Sodium bicarbonate..... 1 dram.
 Aromatic spirit ammonia.... 1 dram.
 Spearmint water..... 2 ounces.

CHILBLAINS.

3221. Chilblains.

Carbolic acid..... 10 grains.
 Petrolatum 1 ounce.
 Oil turpentine..... 1 ounce.
 Apply to affected part.

3222. Chilblains.

Castor oil..... 4 drams.
 Turpentine 4 drams.
 Flexible collodion..... 4 drams.
 To be used 2 or 3 times daily.

3223. Chilblains.

Belladonna liniment..... 2 drams.
 Aconite liniment..... 1 dram.
 Carbolic acid..... 6 minims.
 Flexible collodion, enough to make..... 1 ounce.
 Apply with a camel's hair pencil every night to the parts affected.

3224. Chilblains.

Bismuth salicylate..... 2 drams.
 Pulverized starch 18 drams.
 First bathe the chilblains in a decoction of walnut leaves; then rub with spirits of camphor and cover with the powder. To quiet the itching use the following:
 Glycerine 1 ounce.
 Rose water 1 ounce.
 Tannic acid 1 grain.
 Use as a lotion, and then dust on the above powder.

3225. Chilblains.

Spirit camphor 2 drams.
 Tincture opium 2 drams.
 Carbolic acid 40 grains.
 Alcohol 4 drams.
 Water 4 drams.
 If the skin is broken, this lotion may be diluted with water and applied on lint or with a soft rag.

3226. Chilblain Liniment.

Solution subacetate lead... ½ ounce.
 Stronger water ammonia.. ½ ounce.
 Glycerine ½ ounce.
 Soap liniment 1½ ounces.
 A good remedy for application before the skin is broken.

3227. Chilblain Ointment.

Tincture benzoin 2 drams.
 Linseed oil 4 drams.
 Yellow wax..... 2 drams.
 Glycerine enough to make an ointment.

3228. Chilblain Ointment.

Carbolic acid 1 grain.
 Tincture iodine 2 drams.
 Tannic acid 2 drams.
 Simple cerate 4 ounces.

3229. Chilblain Ointment.

Carbolic acid 1 part.
 Lead ointment 20 parts.
 Lanolin 10 parts.
 Oil sweet almond..... 10 parts.
 Oil lavender 1 part.
 Apply two or three times daily to the affected parts.

3230. Chilblain Tablets.

Benzoated lard 6 parts.
 Yellow wax 3 parts.
 Resin, white..... 1 part.
 Camphor 1 part.
 Oil cajuput 1 part.
 Melt the resin and wax, add the lard; then when somewhat cooled add the camphor in powder, and lastly the cajuput oil.

3231. Frost Bite.

Zinc oxide ½ dram.
 Tannic acid 15 grains.
 Glycerine 1½ drams.
 Balsam Peru 2 drams.
 Camphor 1 dram.
 Apply externally.

3232. Frost Bite.

Tincture benzoin com-
 pound 3 drams.
 Tincture aconite root..... 1 dram.
 Apply externally to the parts affected.

3233. Frost Bite.

Sulphurous acid..... 3 drams.
 Glycerine 1 dram.
 Water 1 dram.
 Apply to affected part.

3234. Frost Bite.

Salicylic acid ½ dram.
 Atropine sulphate..... 5 grains.
 Collodion 4 drams.
 Apply with a camel's hair brush.

3235. Frost Bite Liniment.

Tannic acid 1 part.
 Glycerine (or camphor
 spirit) 25 parts.
 Externally.

3236. Frost Bite Liniment.

Tannic acid 2 parts.
 Alcohol 5 parts.
 Collodion 20 parts.
 Tincture benzoin 2 parts.

3237. Frost Bite.

Powdered camphor 3 grams.
 Lanolin 15 grams.
 Vaseline 15 grams.
 Hydrochloric acid 2 grams.
 Rub in at night.

3238. Frost Bite—Russian Ointment.

Bone marrow 2 drams.
 Hydrochloric acid 1½ drams.
 Althaea ointment 5½ drams.
 Extract opium, aqueous.. 1 dram.
 Camphor 4½ drams.
 Venice turpentine 9½ drams.

3239. Paint for Frost Bite.

Peru balsam 5 grams.
 Oleobalsamic mixture..... 30 grams.
 Cologne water 30 grams.

3240. Frost Balsam.

Castile soap 50.0
 Potassium iodide 30.0
 Camphor 10.0
 Dissolve by shaking with
 Rose water 50.0
 Alcohol 500.0
 Filter the solution, and to the filtrate
 add:
 Tincture benzoin 50.0
 Glycerine 50.0
 An excellent application for frost bites.

WARTS.**3241. Ointment for Warts.**

A rational treatment is said to be the use of a 20 per cent ointment of pyrogallie acid applied two or three times a day.

3242. For Warts.

Salicylic acid 1 part.
 Alcohol 1 part.
 Sulphuric ether 2½ parts.
 Collodion 5 parts.

Paint the warts with the solution daily.

3243. For Warts.

Chrysarobin 40 grains.
 Collodion 3 drams.

Apply with a camel's hair pencil every day or two.

3244. For Warts.

Take off the outer scarf of the wart, causing it to bleed slightly, and apply a saturated solution of ammonium chloride in distilled water. Repeat this application several times daily, until the wart disappears.

3245. For Warts.

Apply once daily about the base of the wart 1 part of corrosive sublimate in 30 parts collodion.

3246. For Warts.

Solution sodium ethylate... 2 drams.

Every two or three days touch the wart with the solution, administered with a camel's hair pencil.

3247. Cure for Warts.

The best cautery for warts is said to be dichloroacetic acid. It must be applied on the sharp point of a stopper made for the purpose, and great caution should be observed not to use too much of it, as it will burn a deep hole in the flesh. One application is frequently sufficient.

3248. Wart and Corn Cure.

One dram each of strong acetic acid and tincture of iodine, with 2 drams thick mucilage.

3249. Ointment for Warts.

Salicylic acid 3 drams.
 Creosote 6 drams.
 Wax,
 Lard, of each sufficient.

Make an ointment firm enough to adhere to the skin.

3250. Powder for Removal of Warts.

Salicylic acid 5 parts.
 Boracic acid 15 parts.
 Calomel 30 parts.

Rub a small portion on the warts thrice daily.

3251. Wart Solution.

One part each of salicylic acid and lactic acid, and 8 parts by weight of collodion. Apply twice a day.

3252. Caustic Collodion for Syphilitic Warts.

A mixture of 25 grams of corrosive sublimate with 2 grams collodion.

BOILS, CARBUNCLES, ETC.**3253. Boils.**

Ichthyol 1 dram.
 Lead plaster..... 2 drams.
 Resin plaster..... 1 dram.

Apply to the part.

3254. Boils.

Chloride lime..... 2 ounces.
 Camphor water..... 4 ounces.
 Tincture myrrh..... 2 drams.
 Creosote 20 minims.
 Glycerine 1 ounce.

Apply constantly in the form of wet compresses.

3255. Boils.

Menthol 10 grains.
 Extract of arnica..... ½ dram.
 Extract of belladonna..... ½ dram.
 Ointment of oxide of zinc.. 1 ounce.

Spread the ointment on a piece of old muslin, and keep the boil constantly so covered.

3256. Boils.

Ointment of subacetate of lead..... 3 drams.
 Iodol ½ dram.
 Ointment of oxide of zinc.. 3 drams.
 Apply to the surface.

3257. Boils.

Cocaine 15 grains.
 Lanolin 1½ ounces.
 Sodium bicarbonate..... 2 drams.
 Olive oil, enough to make a soft ointment.

3258. Ointment for Boils.

Salicylic acid..... 2 drams.
 Soap plaster..... 2 ounces.
 Lead plaster..... 1 ounce.

3259. Ointment for Boils.

Resin 1 pound.
 Mutton tallow..... 1 ounce.
 Beeswax ½ ounce.
 Burgundy pitch..... ½ ounce.
 Balsam fir..... ¼ ounce.
 Venice turpentine..... ¼ ounce.
 Oil spike..... 1 dram.
 Oil hemlock..... 1 dram.
 Oil cedar..... 1 dram.
 Oil origanum..... 1 dram.
 Oil wormwood..... 1 dram.
 Laudanum 1 dram.
 Pulverized camphor gum... 1 dram.

Melt the resin, tallow, beeswax and pitch together. When a little cool, add the oils, laudanum, etc.; stir in the pulverized camphor, and pour into cold water; then, by greasing the hands, it can be pulled and worked until it becomes intimately mixed, when it can be rolled into suitable sized sticks.

3260. Carbuncle.

Take 2 ounces of bicarbonate of sodium. Dust it over the carbuncle, and allow the soda to remain on the skin until it becomes covered with a good many little openings. Then apply a poultice to the part, and follow with a soothing ointment.

3261. Carbuncles and Boils.

Red oxide mercury..... 1 dram.
 Carbolic acid..... 10 grains.
 Gum camphor..... 20 grains.
 Menthol 15 grains.
 Morphine sulphate..... 5 grains.
 Cocaine muriate..... 5 grains.
 Lanolin ½ ounce.
 Vaseline ½ ounce.

Triturate carbolic acid, camphor and menthol until liquefied; then add the morphine and cocaine, and lastly the red oxide mercury. Apply constantly and freely, with no poultices.

3262. Carbuncle Ointment.

Take ½ dram of opium to 2 ounces of white ointment; of this spread on a linen rag a sufficient quantity, to the thickness of the back of a knife. This is to be renewed 3 or 4 times daily.

3263. Felons.

Ointment of resin, compound..... ½ ounce.
 Ointment nitrate of mercury..... ½ ounce.
 Cocaine hydrochlorate..... 10 grains.

Apply before or after making a free incision with the lancet. Previously, hot poultices are frequently applied to the part. Painting it with iodine is sometimes practiced.

3264. To Remove Bone Felon.

Prepare a poultice from equal parts of powdered soap and desiccated salt, and enough balsam of fir to make a mass. The mixture is applied twice daily for 3 days, when it will have made a hole to the bone, and the "core" is then easily taken out.

3265. Whitlow Felon.

Tincture of opium..... 2 ounces.
 Lead water..... 2 ounces.

Use on the part a piece of thin, old muslin, keeping the surface constantly wet with the solution. The part sometimes requires lancing to relieve pain and to restore it to healthy action.

ALCOHOLISM.**3266. Alcoholism.**

Tincture capsicum..... ½ ounce.
 Potassium bromide..... ½ ounce.
 Tincture nux vomica..... 2 drams.
 Aromatic spirits of ammonia..... 3 ounces.
 Syrup tolu, enough to make..... 6 ounces.

A dessertspoonful in water 4 or 5 times daily.

3267. Alcoholism.

Tincture nux vomica..... 1 dram.
 Compound tincture gentian. 3 drams.
 Essence lemon..... 6 minims.
 Spirit chloroform..... 1 dram.
 Water, enough to make..... 6 ounces.

One-sixth to be taken 3 or 4 times daily for insomnia.

3268. Alcoholism.

Compound tincture of gentian..... 2 ounces.
 Compound tincture of calumba..... 2 ounces.
 Tincture nux vomica..... 80 minims.

A dessertspoonful before each meal for rum stomach.

3269. Anti-Spree Mixture.

Pure pepsin 20 parts.
 Pure water 2,000 parts.
 Concentrated muriatic acid..... 15 parts.
 Oil of sassafras 6 parts.
 Mix. Shake well. Take a tablespoonful every half hour.

3270. Jim Jam.

Tincture nux vomica.... $\frac{1}{2}$ fl. ounce.
 Tincture capsicum $\frac{1}{2}$ fl. ounce.
 Tincture digitalis $\frac{1}{2}$ fl. ounce.
 Extract pilocarpus fluid. $\frac{1}{2}$ fl. ounce.
 Extract erythroxylon fluid 2 fl. ounces.
 Extract valerian fluid.. 2 fl. ounces.
 Simple syrup to make... 8 fl. ounces.
 Half fluid ounce every two or three hours, or until marked diaphoresis appears.

3271. Jim Jam.

Potassium bromide..... 240 grains.
 Chloral hydrate 120 grains.
 Solution morphine (Maggendie) 40 minims.
 Syrup orange peel..... 1 fl. ounce.
 Water to make 4 fl. ounces.
 Dose: Half fluid ounce as directed.

3272. Jim Jam.

Potassium bromide 1 ounce.
 Chloral $\frac{1}{2}$ ounce.
 Tincture digitalis 1 fl. ounce.
 Tincture capsicum 1 fl. ounce.
 Tincture ginger 1 fl. ounce.
 Spirit ammonia aromatic 1 fl. ounce.
 Syrup orange peel..... 1 fl. ounce.
 Water to make..... 8 fl. ounces.
 Dose: A teaspoonful.

3273. Remedy for Drunkenness.

Catechu 40 parts.
 Cinchona, powdered..... 20 parts.
 Aromatic powder 10 parts.
 Mix. A teaspoonful three times a day.
 Drink plenty of coffee.

3274. Drunkard's Sleeplessness.

Sulphate of morphia..... 2 parts.
 Muriatic acid..... 10 parts.
 Tincture of gentian..... 250 parts.
 Tincture of quassia..... 250 parts.
 Tincture of calumba..... 250 parts.
 Tincture of nutgalls..... 250 parts.
 Mix. Dose, a teaspoonful several times a day.

3275. Opium Habit.

Strychnine sulphate..... $\frac{1}{2}$ grain.
 Tincture belladonna..... 3 drams.
 Tincture capsicum..... 3 drams.
 Ten drops every three hours, increasing three drops daily.

3276. Opium Habit.

Strychnine sulphate..... $\frac{1}{2}$ grain.
 Compound tincture gentian 2 ounces.
 Compound tincture cinchona 2 ounces.
 Teaspoonful before each meal as a stimulant to the appetite and nervous system.

3277. Opium Habit.

Tincture cannabis indica. 40 minims.
 Spirit ether 1 dram.
 Water enough to make..... 1 ounce.
 ! One dose if insomnia is very protracted.

3278. Opium Habit.

Tincture capsicum 4 drams.
 Potassium bromide 4 drams.
 Aromatic spirits ammonia. 3 ounces.
 Camphor water, enough to make 6 ounces.
 A dessert-spoonful several times daily in the depression of alcoholism and opium habit.

WHOOPIING COUGH.**3279. Whooping Cough.**

Chloral 1 dram.
 Bromide potassium..... 2 drams.
 Syrup wild cherry..... 1 ounce.
 Water 1 ounce.
 A teaspoonful three times a day.

3280. Whooping Cough.

Camphor monobromate 48 grains.
 Mucilage acacia..... 1 or 2 ounces.
 Syrup tolu 2 ounces.
 Teaspoonful for a dose.

3281. Whooping Cough.

Nitric acid, dilute..... 1 dram.
 Syrup 4 ounces.
 Distilled water 4 ounces.
 Tincture belladonna 16 drops.
 One teaspoonful every hour for a two-year-old child.

3282. Whooping Cough.

Terpine 1 to 1.5 grams.
 Antipyrin..... 1.0 gram.
 Syrup orange peel... 50.0 grams.
 Linden water (or mucilage) 60.0 grams.
 One to two teaspoonfuls a day to a child one to four years old.

3283. Whooping Cough.

Flowers of sulphur, 8 to 15 grains; sugar of milk, 16 grains; divide into 10 powders, one every two hours. Tonic medicines (iron, quinine, etc.) must be given at the same time.

3284. Inhalation in Whooping Cough.

Thymol	20 grains.
Acid carboic	2 drams.
Oil sassafras	2 drams.
Oil eucalyptus	2 drams.
Liquid tar	2 drams.
Oil turpentine	2 drams.
Ether	4 fl. drams.
Alcohol to make.....	3 fl. ounces.

Put about thirty drops upon a pad of such a size as to be conveniently hung around the child's neck, renewing the application every two or three hours.

In several cases the inhalation treatment is supplemented by the internal administration of

Acid carboic	3 grains.
Sodium bromide	1 grain.
Tincture belladonna.....	20 drops.
Glycerine	3 drams.
Water to make	2 ounces.

Teaspoonful for a child three or four years, occasionally.

3285. Whooping Cough Candle.

Wood creosote	160
Carbolic acid	80
Naphthaline	200
Saltpetre	40
Coal tar	200
Powdered aconite leaves.....	1,500
Mucilage of tragacanth, quantity sufficient.	

Make it into a mass to form pastilles, each to weigh 1 dram. One pastille is sufficient for a room of ordinary height—100 square feet. Use twice a day, one hour each time.

3286. Picrate of Ammonium Mixture for Whooping Cough.

Picrate of ammonium.....	1 grain.
Chloride of ammonium....	24 grains.
Powdered extract of licorice	1 dram.
Water	3 ounces.

The dose for a child 6 months old or under is a teaspoonful every three hours, doubling the dose for a child 1 to 2 years old.

3287. Viehot's Nitro-Resinous Troches (for Whooping Cough).

Charcoal, in fine powder.	750 parts.
Nitrate of potassium.....	20 parts.
Naphthalin	100 parts.
Creosote	80 parts.
Carbolic acid	40 parts.
Tar	100 parts.
Aconite leaves, powdered.	7.50 parts.
Mucilage of tragacanth, quantity sufficient.	

Make into troches of 4 grams (1 dram each). Burn one night and morning in the closed bedroom of the patient, if it has a

capacity of 350 cubic feet; if it be larger burn two. The inhalation should last for about one hour. The average time of treatment is 7 days.

HEADACHE.

3288. Headache Cure.

Try one of the following:

Caffeine	20 grains.
Ammonium carbonate.....	20 grains.
Elixir guarana.....	1 ounce.

Dose, 1 teaspoonful every hour until relieved.

3289. Headache Cure.

Ammonium chloride.....	3 drams.
Morphine acetate.....	1 grain.
Caffeine citrate.....	½ dram.
Aromatic spirit ammonia..	1 dram.
Elixir guarana.....	4 ounces.
Rose water.....	4 ounces.

Dose, a dessertspoonful every quarter hour until relieved.

The acetate of morphine may be omitted if desired.

3290. Headaches (Rebellious).

Antipyrin	4 parts.
Phenacetin	2 parts.
Antifebrin	1 part.

Dose, from 5 to 16 grains, as may be required.

3291. Migraine.

Extract ergot.....	2 drams.
Extract henbane.....	1 scruple.
Extract cannabis indica....	1 scruple.
Extract nux vomica.....	1 scruple.
Quinine sulphate.....	1 dram.
Iron sulphate.....	½ dram.

Make into 40 pills.

Take 1 pill every 3 hours until relieved; then take 1 before each meal, or every morning and night.

3292. Sick Headache.

Sodium bicarbonate.....	1 dram.
Bismuth subcarbonate....	1 dram.
Powdered gum arabic.....	1 dram.
Aromatic spirit ammonia..	2 drams.
Ammonium bromide.....	1½ drams.
Syrup ginger.....	3 drams.
Distilled water, enough to make.....	8 ounces.

3293. Headache Drops.

Castor, gentian and valerian roots, bruised, ¼ ounce each; laudanum, 1 ounce; sulphuric ether, 1½ ounces; alcohol, ½ pint; water, ½ pint. Put all into a bottle and let stand about 10 days. Dose, a teaspoonful as often as required, or 2 or 3 times daily.

3294. Headache Essence.

Oil lavender..... 4 drams.
 Camphor 2 ounces.
 Stronger water ammonia... 2 ounces.
 Alcohol 14 ounces.
 Fragrant, stimulant, and may be used as
 a rubefacient in local pains.

3295. Headache Pills.

Cocaine 17 grains.
 Extract coca..... 90 grains.
 Caffeine citrate..... 100 grains.
 Quinine valerianate..... 100 grains.
 Arsenious acid..... 1 grain.
 Divide into 100 pills.

3296. Headache Powders.

Caffeine citrate..... 10 parts.
 Phenacetin 25 parts.
 Milk sugar..... 25 parts.
 Dose, 10 grains, to be repeated, if neces-
 sary, in 2 hours.

3297. Headache Powders.

Phenacetin 300 grains.
 Caffeine 15 grains.
 Sodium salicylate..... 15 grains.
 Quinine hydrochlorate..... 200 grains.
 Morphine hydrochlorate... 5 grains.
 Sugar of milk..... 64 grains.
 Saccharin 1 grain.
 Excipient, sufficient.
 Mix, and divide into 100 pills, and cover
 with chocolate or sugar.

NEURALGIA.

3298. Neuralgia.

Ammonium bromide..... 1 dram.
 Sodium salicylate..... 1 dram.
 Tincture hyoscyamus..... 2 drams.
 Water, enough to make.... 4 ounces.
 One teaspoonful every half hour until
 relief is obtained, or four doses have been
 taken.

3299. Neuralgia Mixture.

Tincture belladonna..... 1 ounce.
 Tincture camphor..... 1 ounce.
 Tincture arnica..... 1 ounce.
 Tincture opium..... 1 ounce.
 Apply over the seat of pain, and give
 10 to 20 drops in sweetened water every 2
 hours.

3300. Neuralgia.

Exalgine 32 grains.
 Tincture gelsemium..... 3 fl. drams.
 Alcohol 1 ounce.
 Syrup orange flower
 enough to make..... 2 fl. ounces.
 One small teaspoonful to be taken every
 3 hours until pain is relieved.

3301. Anti-Neuralgic Mixture.

Tincture gelsemium..... 2 fl. drams.
 Ammoniated tincture
 quinine ½ fl. ounce.
 Glycerine ⅓ fl. ounce.
 Water 4 fl. ounces.
 Dose, a tablespoonful every 4 hours in
 water.

3302. Pills for Neuralgia.

Ipecac 60 grains.
 Quinine 100 grains.
 Strychnine 1 grain.
 Iron by hydrogen 25 grains.
 Divide into 30 pills and take one 3 times
 a day.

3303. Neuralgia.

Iodide arsenic 1 grain.
 Extract belladonna 8 grains.
 Morphine valerianate 8 grains.
 Extract gentian 5 grains.
 Fluid extract aconite root.. 5 minims.
 Make into 60 pills. One to three in 24
 hours.

3304. Neuralgia.

Antipyrine 3 drams.
 Caffeine ½ dram.
 Extract cannabis indica.. 5½ grains.
 Extract aconite 5½ grains.
 Hyoscyne hydrobromate... ⅓ grain.
 Make into 30 capsules. One to be taken
 every 3 or 5 hours.

3305. Ointment for Neuralgia.

Tincture aconite 5 parts.
 Tincture chloroform 5 parts.
 Lard 20 parts.
 After applying the ointment, the parts
 are covered with cotton.

3306. Anti-Neuralgic Ointment.

Menthol 75 parts.
 Cocaine 25 parts.
 Chloral hydrate 15 parts.
 Petrolatum 500 parts.
 Apply to the painful part.

3307. Neuralgia.

Iron by hydrogen..... ½ dram.
 Zinc oxide ½ dram.
 Zinc cyanide 3 grains.
 Extract cannabis indica... ½ dram.
 Make into 30 pills.
 One pill after each meal, or in acute
 cases one every hour for five doses.

3308. Neuralgic Tablets.

Quinine sulphate ½ grain.
 Morphine sulphate 1-10 grain.
 Strychnine sulphate..... 1-120 grain.
 Arsenious acid 1-80 grain.
 Extract aconite ⅓ grain.
 One tablet repeated every hour.

3309. Neuralgic Pills.

Iron phosphate 440 grains.
 Tragacanth, powdered... 120 grains.
 Quinine sulphate..... 2½ ounces.
 Extract henbane 2 ounces.
 Extraet aloes soeotrine.. ½ ounce.
 Aetie extraet eoichieum ½ ounce.
 Camphor 160 grains.

Divide into 3½ grain pills. One to be taken every 3 hours until relief is obtained, then one twice a day for a few days.

3310. For Insomnia.

Chloral 2 drams.
 Potassium bromide 3 drams.
 Tincture opium 1 dram.
 Syrup orange peel..... 3 drams.
 Water, enough to make... 2 ounces.

Dose, a teaspoonful.

3311. Cerebral Sedative.

Chloral hydrate 2 drams.
 Potassium bromide 2 drams.
 Fluid extraet gelsemium. 50 minims.
 Tincture opium 40 minims.
 Simple elixir, enough to make 1 ounce.

Dose, one-half teaspoonful.

3312. Epileptic (Conium) Mixture.

Potassium bromide 1 ounce.
 Fluid extraet conium..... ½ ounce.
 Water enough to make... 4 ounces.

Take a teaspoonful three times a day.

3313. Mixture for Epilepsy, Brown-Sequard.

Sodium bromide 180 grains.
 Potassium bromide 180 grains.
 Ammonium bromide... 180 grains.
 Potassium iodide 90 grains.
 Ammonium iodide 90 grains.
 Ammonium earbonate... 60 grains.
 Tincture calumba..... 1½ fl. ounces.
 Water enough to make.. 8 fl. ounces.

Dose, 1½ drams before meals and 3 drams at bedtime.

KIDNEY AND LIVER REMEDIES.

3314. Kidney and Liver Mixture.

Nitrohydrochlorie acid,
 dilute 5 minims.
 Potassium nitrate..... 5 grains.
 Dandelion julee 20 minims.
 Tincture buchu 15 minims.
 Fluid extraet pareira..... 15 minims.
 Fluid extraet glycyrrhiza. 15 minims.
 Tincture mandrake 5 minims.
 Spirit juniper 10 minims.
 Water, enough to make.. ½ ounce.

For one dose.

3315. Kidney and Liver Cure.

Liverwort 4 ounces.
 Jamalca dogweed 1 ounce.
 Ergot 2 ounces.
 Couch grass 4 ounces.
 Wintergreen 2 ounces.
 Potassium nitrate..... 1 ounce av.
 Alcohol 2 pints.
 Glycerine 12 fl. ounces.
 Water, sufficient quantity

to make 1 gallon.

Grind the drugs to No. 20 or 30 powder, percolate with all the glycerine and alcohol mixed with 2 quarts of water. When that has all passed, add enough hot water to make 1 gallon, add the nitrate of potash and dissolve.

3316. Kidney and Liver Remedy.

Hepatica 1 ounce.
 Hydrangea 1 ounce.
 Scoparius 1 ounce.
 Apocynum cannabinum... 1 ounce.
 Triticum 1 ounce.
 Hot water sufficient to make 10 ounces.
 Potassium nitrate 320 grains.
 Alcohol 3 ounces.
 Dextrin syrup 3 ounces.

Fluid extracts may be substituted for the crude drugs, in which case the alcohol in the above formula is omitted, and the proportion of water reduced to 5 ounces, instead of 10, as above, the remaining ingredients being left the same.

3317. Liver Medicine.

Senna 13 ounces.
 Buchu 2 ounces.
 Serpentaria 6 ounces.
 Bitter root..... 4 ounces.
 Wild cherry..... 4 ounces.
 Cinchona 4 ounces.

Digest the senna and buchu for 24 hours with 10 pints of boiling water, then add 6 pints diluted alcohol, and let stand 24 hours longer; express. Treat likewise the serpentaria and bitter root with 6 pints of boiling water, and add 2 pints diluted alcohol as above; express. Treat likewise the wild cherry and cinchona with 4 pints of boiling water, add 2 pints diluted alcohol and express. Mix all these expressions, let stand 24 hours, and strain.

3318. Kidney Tonic.

Chicory root..... 9 ounces.
 Couch glass..... 2 ounces.
 Red clover..... 1 ounce.
 Dulcamara 2 ounces.

Dry carefully and powder all together.

3319. Kidney Tea.

Buchu 2 parts.
 Uva ursi..... 2 parts.
 Juniper 1 part.
 In coarse powder.

3320. Diuretic Species.

Juniper berries..... 15
 Pansy 60
 (Viola, trl-color.)
 Lovage root..... 30

3321. Diuretic Tea.

Lovage root..... 20
 Rest harrow root..... 20
 (Ononidis.)
 Licorice root..... 20
 German stoechadis flowers..... 20
 (Stoechadis citrinae.)
 Juniper berries..... 20

3322. Diuretic Wine.

Oil turpentine..... 2 fl. drams.
 Lemon juice..... 1 fl. ounce.
 Wine 4 fl. ounces.
 For a single dose.

3323. Diuretic Wine.

Powdered squill..... 5 drams.
 Powdered digitalis..... 10 ounces.
 Bruised juniper berries.... 6 ounces.
 White wine..... 10 fl. ounces.
 Potassium acetate..... 2 ounces.

The first three ingredients are macerated in the wine for four days, and the mixture is then strained.

3324. For Diabetes.

Extract bugleweed..... 5 drams.
 Extract liverwort..... 4 drams.
 Nitrate potash..... 40 grains.
 Oil wintergreen..... 8 minims.
 Rectified spirit..... 3 ounces.
 Glycerine 10 drams.
 Water to..... 12 ounces.

Dose, a tablespoonful 3 times a day.

3325. Pills, Anti-Canker (Thompsonian).

Capsicum,
 Extract bayberry,
 Of each equal parts.

BURNS, SCALDS, ETC.**3326. Burns.**

Salicylic acid..... 1 dram.
 Olive oil..... 8 ounces.
 Apply to burn, covering with linen or lint.

3327. Burns.

Salol 1 part.
 Olive oil..... 70 parts.
 Lime water..... 70 parts.

3328. Burns.

Immerse the burned part in cool water, and afterward paint it with oil of peppermint.

3329. Burns.

Boracic acid..... 2 drams.
 Glycerine 2 ounces.
 Olive oil..... 2 ounces.
 Saturate a piece of old muslin, or a piece of absorbent cotton, with the lotion, and use it on the painful surface.

3330. Burns.

Acid carbolic..... 1½ fl. drams.
 Glycerine 6 fl. ounces.
 Olive oil..... 6 fl. ounces.
 Solution subacetate lead,
 dilute..... 3 fl. ounces.

3331. Burns.

Tannin cannot be too highly recommended as an application to burns, especially when very extensive, the skin being entirely removed. A 5 per cent solution is squeezed from a sponge over the denuded surface, which is then dressed with some soft ointment, either with or without tannin. Pain immediately abates, and the healing process is wonderfully rapid. The solution must be freshly applied as often as the dressings are removed.

3332. Burns.

Bismuth subnitrate..... 2 ounces.
 Vaseline 2 ounces.
 Glycerine 2 ounces.
 Triturate bismuth with the vaseline, then add glycerine until reduced to the consistency of cream.

3333. Burns and Scalds.

Solution subacetate of lead. 4 ounces.
 Tincture of opium..... 2 ounces.
 Distilled witch hazel..... 2 ounces.
 Apply to the skin with a piece of old muslin.

3334. Burns and Scalds.

Bicarbonate of sodium..... ½ ounce.
 Subnitrate of bismuth..... ½ ounce.
 Keep the surface covered with the powder.

3335. Burns and Scalds.

Creosote 15 drops.
 Cocaine hydrochlorate..... 10 grains.
 Lime water..... ½ pint.
 Linseed oil..... ½ pint.
 Apply constantly to the skin with soft old muslin or cotton.

3336. Ointment for Burus.

Iodoform	2 drams.
Spermaceti ointment.....	1 ounce.
Extract conium.....	1½ drams.
Carbolic acid.....	10 drops.

To be spread on linen and applied twice daily to the burned surface, the part being then enveloped in oiled silk. No other dressing is required, but in cases where there is great dryness of the surface from the destruction of vitality and want of exhalation, the wound, before applying the ointment should be covered with some common linimentum calcis, which affords a soft and moist dressing, and in no wise interferes with the action of the iodoform, the active ingredient of the ointment.

3337. Ointment Boric Acid in Burus.

Boric acid.....	5 grams.
Antipyrin	5 grams.
Iodoform	1 gram.
Vaseline	50 grams.

3338. Fever Blisters.

Carbolic acid.....	5 drops.
Suet	½ ounce.

Place the ingredients in a pan and mix while heating them. Frequently apply the mixture, when cold, to the lips.

MEDICATED CRAYONS.**3339. Crayon of Red Precipitate.**

Red precipitate.....	1½ grams.
Glycerine	10 grams.
Cacao butter.....	20 grams.

3340. Crayon of Oil of Cade.

Oil of cade.....	1 gram.
Glycerine	10 grams.
Cacao butter.....	20 grams.

3341. Crayon of Iodoform, Deodorized.

Iodoform	30 grams.
Oil of peppermint.....	6 drops.
Glycerine	10 grams.
Cacao butter.....	20 grams.

3342. Crayon of Corrosive Sublimate.

Corrosive sublimate.....	1 gram.
Glycerine (or vaseline).....	5 grams.
Cacao butter.....	27 grams.

3343. Crayon of Balsam of Peru.

Balsam of Peru.....	5 grams.
Glycerine (or vaseline).....	5 grams.
Cacao butter.....	20 grams.

3344. Ophthalmic Crayons.

Red precipitate.....	0.30 gram.
Sulphate of zinc.....	0.60 gram.
Vaseline	10. grams.
Cacao butter.....	20. grams.

3345. Ophthalmic Crayons.

Red precipitate.....	3. grams.
Oxide zinc.....	3. grams.
Acetate lead.....	3. grams.
Burnt alum.....	3. grams.
Corrosive sublimate.....	0.45 gram.
Glycerine	10. grams.
Cacao butter.....	20. grams.

3346. Ophthalmic Crayons.

Red precipitate.....	1.50 grams.
Powdered camphor.....	1.50 grams.
Acetate lead.....	1.50 grams.
Vaseline	10. grams.
Cacao butter.....	20. grams.

3347. Crayon of Tar.

Norway tar.....	5 grams.
Vaseline	5 grams.
Cacao butter.....	20 grams.

3348. Crayon of Opium and Belladonna.

Extract of opium.....	5 grams.
Extract of belladonna.....	5 grams.
Glycerine	5 grams.
Cacao butter.....	20 grams.

3349. Crayon of Turpeth Mineral.

Turpeth mineral.....	1 gram.
Salep, in fine powder.....	2 grams.
Glycerine	10 grams.
Cacao butter.....	20 grams.

SPRAY SOLUTIONS.**3350. Spray.**

Compound tincture	
benzoin	½ fl. ounce.
Glycerine	½ fl. ounce.
Alcohol	1½ ounces.
Mix.	

3351. Anaesthetic Spray.

Menthol	1 part.
Ether	15 parts.
Chloroform	100 parts.
Externally.	

Anaesthesia appears very quickly, is complete, and continues for 2-6 minute. Recommended in cutting fistulas and other minor operations.

3352. Eucalyptol Spray.

Oil eucalyptus.....	½ dram.
Terebene	½ dram.
Menthol	3 grains.
Liquid petrolatum.....	2 ounces.

3353. Eucalyptol Spray.

Oil eucalyptus.....	20 minims.
Creosote	10 minims.
Ether	2 drams.
Oil sweet almonds, enough to make.....	1 ounce.

3354. Eucalyptol Spray.

Oil eucalyptus..... 1 dram.
Liquid petrolatum..... 1 ounce.

3355. Eucalyptol Spray.

Carbolic acid, crystals..... 1 dram.
Oil eucalyptus..... 1 dram.
Oleate cocaine..... 10 grains.
Oil petrolatum, enough to
make..... 3 ounces.

3356. Pine Spray.

Dissolve in 900 parts of alcohol, 80 parts of oil of pine needles (*pinus sylvestris*), 10 parts of oil of juniper berries, 5 parts of oil of rosemary, 3 parts of oil of lavender and 2 parts of the oil of lemon. The oils must all be of the finest quality.

3357. Oil of Pine Inhalation.

Oil *pinus sylvestris*..... 2 drams.
Magnesium carbonate..... 1 dram.
Water 3 ounces.

A teaspoonful in a pint of hot water for each inhalation.

3358. Spirit of Pines.

Oil *pinus sylvestris*..... 100 grams.
Oil *pinus pumilionis*..... 1 gram.
Oil orange peel..... 25 grams.
Tincture vanilla..... 5 grams.
Acetic ether..... 25 drops.
Alcohol 200 grams.
Oil cardamom..... 1 drop.

Dissolve the oils in the spirit, add the ether, and color with a few drops of chlorophyll. Only a small quantity of this preparation should be kept in stock, and all should be kept in a cool, dark place, as it is liable to deteriorate.

3359. Tar and Turpentine Inhalation.

Oil tar..... 2 ounces.
Oil turpentine..... 2 ounces.

Pour slowly on a hot shovel in a sick room, keeping the vapor confined therein.

AGUE, CHILLS, ETC.

3360. Ague Remedy.

Tincture eucalyptus..... 2 ounces.
Tincture serpentaria..... 4 ounces.
Tincture capsicum..... 5 drams.
Tincture myrrh..... 5 drams.
Tincture nux vomica..... 2 drams.
Quinine sulphate..... 60 grains.
Elixir glycyrrhiza, sufficient
to make..... 16 ounces.
Mlx. Dose, $\frac{1}{2}$ tablespoonful.

3361. Dutch Ague Remedy.

A mixture formed of Peruvian bark and cream of tartar, of each 1 ounce; cloves, $\frac{1}{2}$ dram; reduced to fine powder. Dose, $1\frac{1}{2}$ drams every 3 hours.

3362. Ague Bitters.

Quinine, 40 grains; capsicum, 20 grains; cloves, $\frac{1}{4}$ ounce; cream of tartar, 1 ounce; whisky, 1 pint; mix. Dose, 1 to 2 tablespoonfuls every 2 hours, beginning 8 hours before the chill comes on, and 3 times daily for several days.

3363. Ague Pill.

Quinine, 20 grains; Dover's powders, 20 grains; subcarbonate of iron, 10 grains; mix with mucilage of gum arabic and form into 20 pills. Dose, 2 each hour, commencing 5 hours before the chill should set in. Then take 1 night and morning until all are taken.

3364. Ague Specific.

Quinine sulphate..... $1\frac{1}{2}$ drams.
Iron sulphate..... 1 dram.
Oil sassafras..... 30 drops.
Oil black pepper..... 30 drops.
Arsenious acid..... 2 grains.

Mix, and divide into 30 pills. One pill 3 times a day at meal time.

3365. Fever and Ague Tonic.

Powdered Peruvian bark... 4 ounces.
Solution of muriate of ar-
senic..... 1 ounce.
Orange peel, ground..... 1 ounce.
Gentian root, ground..... 2 ounces.
Rye whisky..... 16 ounces.

Macerate for 14 days, and filter through paper. Dose, a teaspoonful every 2 or 3 hours when the fever is off.

3366. Chronic Chills.

Cinchonidia sulphate..... 20 grains.
Chinoidin 20 grains.
Podophyllin 3 grains.
Ipecac, powdered..... 15 grains.
Capsicum, powdered..... 20 grains.

Make into 5-grain pills.

One every 3 hours, with water slightly acidulated with muriatic acid.

3367. Chills.

Quinia sulphate..... 30 grains.
Cinchonidia 30 grains.
Acid sulphuric..... 10 minims.
Liquor potassium arsenite. 1 dram.
Fluid extract nux vomica.. 10 minims.
Water, to make..... 4 ounces.

Tablespoonful every hour when fever is off.

3368. Cholagogue Pills.

Arsenious acid..... 1 grain.
Corrosive sublimate..... 1 grain.
Powdered ipecac..... 2 grains.
Calomel 15 grains.

Make into 15 tablets. One every 3 or 4 hours until catharsis, or one every second or third night, as the exigency of the case may require.

3369. Tonic Cholagogue.

Quinine sulphate..... 2 drams.
 Extract leptandra..... 1 dram.
 Tincture stillingia..... 4 fl. ounces.
 Tincture podophyllum.... 3 drams.
 Oil sassafras..... 10 drops.
 Oil wintergreen..... 10 drops.
 Molasses, to make..... 8 fl. ounces.

Dose, a teaspoonful 3 times a day.

ITCH.

3370. Itch Liniment.

Naphthol 10 parts.
 Balsam Peru 2 parts.
 Dissolve in
 Alcohol 40 parts.
 Glycerine 40 parts.
 Add
 Oil of bergamot..... 2 parts.

3371. Soap Ointment for Itch, Paul's.

Castile soap 100 parts.
 Petroleum 50 parts.
 Alcohol 50 parts.
 Wax 40 parts.

Mix, and make a soap ointment. To be applied once a day to the affected part. Three or four applications rarely fail to effect a cure.

3372. Itch Ointment.

Sulphur 2 drams.
 Calomel 1 dram.
 Vaseline 2 ounces.

Apply daily.

3373. Itch Ointment.

Balsam of Peru..... 1 ounce.
 Benzoic acid 110 grains.
 Oil of cloves 40 drops.
 Alcohol 2½ drams.
 Simple cerate 7 ounces.

Dissolve the essential oil and the benzoic acid in the alcohol and mix with the cerate, then add the balsam of Peru.

This is said to cure the Itch in 24 hours.

3374 Soap Ointment for Itch, Paul's.

Brown soap 1 ounce.
 Common salt ½ ounce.
 Sulphur ½ ounce.
 Alcohol 1 fl. dram.
 Vinegar 2 fl. drams.
 Chlorinated lime ½ dram.

Rub well together; ¼ to be used night and morning as a friction. It is effectual, cheap, inoffensive.

3375. Itch Pomade.

Creolin 5 parts.
 Vaseline 100 parts.

Mix. Use with friction once every day over the parts affected.

3376. Barber's Itch.

Tannic acid 45 grains.
 Lac sulphur 1½ drams.
 Zinc oxide 4 drams.
 Starch 4 drams.
 Vaseline 1 ounce.

Make into an ointment and use twice daily.

3377. Barber's Itch.

Prepared chalk 10 parts.
 Coal tar 1 to 4 parts.
 Glycerine 5 parts.
 Simple cerate 50 parts.

3378. Barber's Itch.

Prepared chalk 8 parts.
 Coal tar 1 to 20 parts.
 Linseed oil 20 parts.

Cut the hairs short or shave them off, and apply once or twice a week.

RASHES, HIVES, ETC.

3379. Nettle Rash (Hives).

Boracic acid 2 drams.
 Ointment of rose water... ½ ounce.
 Ointment oxide of zinc.... ½ ounce.

Apply to the irritated skin.

3380. Nettle Rash (Hives).

Carbolic acid 5 grains.
 Sulphur ½ dram.
 Camphor 10 grains.
 Ointment zinc oxide..... 1 ounce.

Apply frequently to the irritated surface.

3381. Nettle Rash (Hives).

Carbolic acid 1 dram.
 Water 1 pint.

Drop over the irritated skin.

3382. Poison Oak.

Sodium hyposulphite..... 1 ounce.
 Distilled water 8 ounces.
 Carbolic acid 1 ounce.
 Glycerine ½ ounce.

Shake well and use as a wash thrice daily.

3383. Poisoning From Ivy.

Impure carbonate of zinc. ½ ounce.
 Lime water 2 ounces.
 Glycerine 2 ounces.

Apply to the skin with a piece of soft, old muslin.

3384. Poisoning From Ivy.

Carbonate of lead..... 2 drams.
 Powdered arrow root..... 2 drams.
 Powdered gum acacia..... 1 dram.
 Hydrochlorate of cocaine... 10 grains.
 Olive oil 3 ounces.

Spread over the skin.

3385. Bites of Insects.

Beta-naphthol 1 dram.
 Cologne ½ pint.
 Apply to the irritated skin.

EAR REMEDIES.**3386. Earache.**

Take equal parts of chloroform and laudanum, dip a piece of cotton into the mixture and introduce into the ear, and cover up and get to sleep as soon as possible.

3387. Earache Drops.

Camphor 1 dram.
 Chloral 1 dram.
 Glycerine 2 ounces.
 Oil almonds 1 dram.
 To be applied on cotton wool in the ear.
 May also be rubbed daily behind the ear.

3388. Wax in the Ear.

Borax 2 drams.
 Potassium chlorate..... 1 dram.
 Glycerine ½ ounce.
 Alcohol 2 drams.
 Rose water, enough to
 make 6 ounces.
 Apply with a sponge several times a day.

3389. Softening Ear Wax.

Borax 10 grains.
 Glycerine ½ dram.
 Water 1 ounce.
 Two or three drops warmed and gently dropped into the ear every day for two or three days, to be followed by syringing the ear.

3390. Acoustic Oil.

Oil of turpentine 1 part.
 Oil of almonds 6 parts.
 Mix.
 In atonic deafness, accompanied with induration of wax, 1 or 2 drops are poured into the ear, or on a piece of cotton wool, which is then gently placed in it.

3391. Otalgic Balsam (Ear Balsam).

Pure carbolic acid 10 drops.
 Rectified oil of amber..... 5 drops.
 Oil of hyoscyamus 5 grams.
 Olive oil 30 grams.
 Three to four drops, once or twice daily in the ear.

3392. Taylor's Remedy for Deafness.

Digest 2 ounces bruised garlic in 1 pound oil of almonds for a week and strain. A drop poured into the ear is effective in temporary deafness.

FEBRIFUGES.**3393. Febrifuge.**

Quinine sulphate..... 2 drams.
 Aromatic sulphuric acid.... 1 dram.
 Oil of peppermint..... 5 minims.
 Fluid extract glycyrrhiza... 1 ounce.
 Glycerine..... 4 fl. ounces.
 A teaspoonful every 3 or 4 hours.

3394. Febrifuge Tea.

Take Virginla snake-root and valerian root, of each 2 drams, and of boiling water 1 pint. Pour the boiling water on the roots and steep half an hour, and give a teaspoonful of the febrifuge and a teaspoonful of this tea together every 2 hours, and after the patient has been 24 hours without fever, give it every 3 or 4 hours, until the patient has good appetite and digestion; then 3 times daily, just before meals, until the patient has gained considerable strength, when it may be entirely discontinued; or he may continue the simple infusion to aid digestion.

3395. Febrifuge Wine.

Quinine, 25 grains; water, 1 pint; sulphuric acid, 15 drops; epsom salts, 2 ounces; color with tincture of red saunders. Dose, a wineglassful 3 times per day.

3396. Sage Tea.

Dried leaves of sage..... ½ ounce.
 Boiling water..... 1 quart.
 Infuse for half an hour, and then strain. Sugar and lemon juice may be added in the proportion required by the patient. In the same manner may be made balm and other teas.
 These infusions form very agreeable and useful drinks in fever, and their diaphoretic powers may be increased by the addition of sweet spirits of nitre, or antimonial wine.

3397. Hager's Fever Powders.

Quinidine tannate..... 150 grains.
 Magnesium carbonate..... 15 grains.
 Oil fennel..... 5 drops.
 Licorice root..... 30 grains.
 Sugar 650 grains.
 This powder is best given in milk, acidulous drinks being avoided. Up to the age of 2 years give as much as will lie on the point of a table knife every 2 or 3 hours; for older children, double the dose; when the fever subsides, give every 3 or 4 hours. Hager recommends this composition in preference to the well-known Hufeland's baby powder (rhubarb and magnesia) for teething troubles, feverishness, diarrhoea, catarrh, cough and restlessness.

3398. Compound Infusion of Sage.

Sage ½ ounce.
 Boneset ½ ounce.
 Cascarella 1 dram.
 Water 1½ pints.

Infuse till cold, and strain. Dose, a wine-glassful every 3 or 4 hours. In hectic fever.

3399. Dover's Powder, Camphorated or Eelectic.

Opium, powdered..... 30 grains.
 Ipecac, powdered..... 60 grains.
 Camphor, powdered..... 120 grains.
 Cream of tartar, powdered..... 480 grains.

Mix thoroughly.

Every 23 grains contain 1 grain of opium.
 The average dose is about 10 grains.

3400. Diaphoretic Powder.

Golden sulphuret of antimony..... 5 parts.
 Camphor 5 parts.
 Purified sulphur..... 80 parts.
 White sugar..... 80 parts.

Mix and wrap in paraffin paper.

3401. Diaphoretic Powder (Graefe's).

Camphor 0.10 grams.
 Opium 0.03 grams.
 Potassium nitrate..... 0.30 grams.
 Sugar 10.00 grams.

CHOLERA.**3402. Cholera Drops.**

Aromatic tincture..... 40 parts.
 Acetic ether..... 9 parts.
 Oil of peppermint..... 1 part.

Mix.

3403. Cholera Drops.

Aromatic sulphuric acid.... 1 scruple.
 Acetic ether..... 2 scruples.
 Alcohol 1 dram.
 Camphor, q. s.

In time of cholera, 2 to 4 drops to be taken on sugar at the least sign of illness.

3404. Cholera Preventive.

Dr. Honningsberger, of Calcutta, has employed with success a mixture consisting of 1 ounce tincture quassia, ½ dram powdered cloves, 15 grains crystallized protosulphate iron for vaccinating as a preventive of cholera. It is applied in the same manner as vaccine virus.

3405. Cholera Drops, Russian.

Tincture opium..... 75 minims.
 Tincture nux vomica..... 15 minims.
 Tincture valerian..... 2½ drams.
 Oil peppermint..... 3 drops.

Dose, 25 to 30 drops every hour or two, alone or in peppermint water.

3406. Cholera Drops (Schillbach's).

Tincture of angelica..... 2 parts.
 Tincture of calamus..... 2 parts.
 Tincture of cloves..... 1 part.
 Tincture of cubebs..... 1 part.
 Tincture of cinnamon..... 1 part.
 Tincture of opium..... 2 parts.
 Tincture of saffron..... 2 parts.
 Proof spirit..... 11 parts.

Mix.

3407. Anti-Cholera Mixture.

Gum opium..... ¼ pound.
 Gum catechu..... 1 pound.
 Gum camphor..... 7 ounces.
 Powdered rhubarb..... ¼ pound.
 Oil of anise..... 7 drams.
 Oil of cloves..... 4 drams.
 Alcohol 1 gallon.
 Water, boiling..... ½ gallon.

Dissolve the opium in 1 pint of boiling water, and then dissolve the catechu in the remainder of the water. Set aside both solutions for 24 hours, then express and strain. In 4 ounces of the alcohol dissolve the oils. Place the rhubarb in a percolator and pour the remaining alcohol upon it. To this solution add the other three solutions. The mixture to be well shaken.

3408. Stephens' Cholera Mixture.

Cayenne pepper..... 2 drams.
 Common salt..... 1 dram.
 Boiling water..... 10 ounces.

When cold add:

Vinegar 10 ounces.
 One tablespoonful every half hour.

3409. Hypodermic Injection for Cholera.

Chloral hydrate..... 3 drams.
 Morphine sulphate..... 4 grains.
 Cherry laurel water..... 1 ounce.
 Use 15 to 20 drops.

3410. Stevens' Saline Powder.

Chlorate of potassium..... 7 grains.
 Chloride of sodium..... 1 scruple.
 Bicarbonate of sodium..... ½ dram.

Mix. For a dose. Recommended in cholera.

HOUSEHOLD PLASTERS.**3411. Salicylic Acid Plaster.**

Soap plaster..... 85 parts.
 Yellow wax..... 5 parts.
 Salicylic acid..... 10 parts.

Gently fuse the first two articles, and after removal from the heat add the salicylic acid.

3412. Peruvian Plaster (Breast Plaster).

Lead plaster, ammoniac and mercury plaster, soap plaster, of each 2 troy ounces; powdered camphor, 6 drams; balsam Peru, 4 drams; mercurial ointment, 2 drams. Melt the plaster and mix in the other ingredients.

3413. Honey Plaster.

Compound lead plaster..... 20
Yellow wax..... 20
Liquefy on a water-bath, and mix with it
Purified honey..... 20

3414. Mustard Plaster.

Warm water, sufficient.
Flour of mustard 4 ounces.
Rye meal 2 ounces.
Make into a paste and spread upon muslin or cotton flannel with gauze between it and the skin.

3415. Poor Man's Plaster.

Beeswax 1 ounce.
Tar 3 ounces.
Resin 3 ounces.
Melt together and spread on paper or muslin.

3416. Rheumatic Plaster.

One-quarter pound of resin and $\frac{1}{4}$ pound of sulphur; melt them by a slow fire; then add 1 ounce of cayenne pepper, and $\frac{1}{4}$ of an ounce of camphor gum; stir well till mixed and temper with neats-foot oil.

3417. Strengthening Plaster.

Litharge plaster, 24 parts; white resin, 6 parts; yellow wax and olive oil, of each 3 parts; and red oxide of iron, 8 parts. Let the oxide be rubbed with oil, and the other ingredients added melted, and mix the whole well together. This is an excellent plaster for relaxation of the muscles and weakness of the joints arising from sprains and bruises. The plaster, after being spread over leather, should be cut into strips 2 inches wide, and strapped firmly around the joint.

MISCELLANEOUS FAMILY MEDICINES.

3418. Cough Pill.

Purified tar 15 grains.
Dover's powder 22 grains.
Benzoin, sufficient quantity.
Make into a mass and divide into 20 pills, of which one may be given several times a day. It is said to relieve cases of chronic bronchitis, with emphysema, or a persistent, tenacious cough. It will constipate the bowels, and this should be looked after when the remedy is used.

3419. Gravel Pills.

Powdered squill 1 grain.
Powdered soap $1\frac{1}{2}$ grains.
Oil of juniper..... $\frac{1}{2}$ minim.
Extract of henbane, a sufficiency to make a pill. One pill three times a day.

3420. Dr. Marshall Hall's Dinner Pills.

Take of Barbadoes aloes, soap, powdered extract of licorice, equal parts; molasses a sufficient quantity.

Make a mass and form into pills of 4 grains each.

3421. Mandrake Pills.

Leptandrin 1 dram.
Podophyllin 15 grains.
Apocynin $\frac{1}{2}$ dram.
Lobelia 2 grains.
Mass with sufficient white castile soap moistened with strong essence peppermint and make into 3-grain pills.
Dose, 1 or 2 pills at bedtime.

3422. Composition Powder.

Bayberry bark 1 pound.
Ginger 1 ounce.
Cloves 1 ounce.
Capsicum 1 ounce.

3423. Composition Powder.

Hemlock bark 2 pounds.
Bayberry bark 1 pound.
Ginger $\frac{1}{2}$ ounce.
Capsicum 1 ounce.
Cloves 1 ounce.

The latter formula is not so strong as the preceding. The hemlock bark is considered an addition to its diaphoretic properties.

3424. Composition Powder.

Bayberry 4 ounces.
Pinus canadensis..... 2 ounces.
Ginger 2 ounces.
Cayenne $\frac{1}{4}$ ounce.
Cloves $\frac{1}{4}$ ounce.

3425. Composition Powder.

Bayberry 4 ounces.
Pinus canadensis..... 4 ounces.
Ginger 4 ounces.
Golden seal 2 ounces.
Sassafras 2 ounces.
Cayenne $\frac{1}{2}$ ounce.
Cloves $\frac{1}{2}$ ounce.

3426. Composition Powder.

Bayberry 12 ounces.
Turmeric 4 ounces.
Cloves 5 ounces.
Ginger $7\frac{1}{2}$ ounces.
Cayenne $1\frac{1}{2}$ ounces.
All finely powdered and mixed. The dose of the preparation is a teaspoonful in a cup of sweetened hot water.

3427. Diachylon Wound Powder.

Five grams lead plaster and 2 grams yellow wax, with 20 grams ether, are agitated in a flask until solution or perfect disintegration of the lead plaster results. Forty-five grams wheat starch, 45 grams talcum and 3 grams boric acid, all in very fine powder, are mixed in a mortar, then the ethereal solution added, perfumed with one drop each of the oils of wintergreen and bergamot, and exposed on parchment paper at ordinary temperature until the volatilization of the ether. This powder is valuable as a dusting powder in chafing, sore feet, etc.

3428. Charcoal Poultice, Thompsonian.

Charcoal 3 parts.
Ginger 1 part.
Bayberry 1 part.
Slippery elm 2 parts.
Hot water, sufficient.

3429. Charcoal Poultice.

Wood charcoal, in powder $\frac{1}{2}$ ounce.
Crumbs of bread..... 2 ounces.
Cake meal $1\frac{1}{2}$ ounces.
Boiling water 10 fl. ounces.
Macerate the bread in the water near the fire; mix; stir in the meal and half the charcoal, and sprinkle the remainder of the charcoal on the surface of the poultice.

3430. Solution for Fetid Breath.

Chlorinated lime 3 drams.
Distilled water 2 drams.
Alcohol 2 drams.
Oil of rose..... 4 minims.
A teaspoonful in a glass of water as a lotion for the mouth.

3431. Solution for Fetid Breath.

Salicylic acid 1 dram.
Solution acetate of ammonium 3 ounces.
Glycerine 1 ounce.
Water enough to make..... 6 ounces.
A tablespoonful every six hours.

3432. Lotion for Fetid Perspiration of the Feet.

Potassium permanganate.. 30 grains.
Water 4 ounces.
The lotion to be applied morning and evening, and the feet to be afterwards powdered with lycopodium or starch.

3433. Solution of Coal Tar.

Quillaja bark in No. 20 powder 2 ounces.
Rectified spirit, a sufficient quantity.
Moisten the powder with a sufficient quantity of the menstruum and macerate for twenty-four hours in a closed vessel. Then pack in a percolator, and gradually

pour rectified spirit upon it until 1 pint of percolate is obtained. To this add:

Prepared coal tar..... 4 ounces.
Digest at a temperature of 120 degrees F. for two days and allow to become cold, and decant or filter.

3434. Soothing Syrup.

Monobromate of camphor.. 16 grains.
Tincture of henbane..... 4 drams.
Syrup of lettuce, to..... 8 ounces.
Mix. Dose, a teaspoonful every hour until relief is obtained.

3435. Soothing Syrup Without Opium.

Oil anise..... 25 minims.
Alcohol 2 ounces.
Fluid extract valerian..... 1 ounce.
Oil peppermint..... 15 minims.
Tincture camphor..... 2 drams.
Fluid extract licorice..... 1 ounce.
Shake the bottle. Dose, $\frac{1}{4}$ to $\frac{1}{2}$ teaspoonful in water; repeat as needed.

3436. Soothing Syrup Without Opium.

Ammonium bromide..... 960 grains.
Chloroform 2 drams.
Fluid extract conium..... 2 drams.
Tincture hyoscyamus..... 4 drams.
Dextrin syrup..... 8 ounces.
Water, sufficient to make.. 16 ounces.
Mix.

3437. Ammonia in the Bath.

Nothing so quickly restores tone to exhausted nerves and strength to a weary body as a bath containing an ounce of ammonia to each pail of water. It makes the flesh firm and smooth as marble, and renders the body pure and free from odor.

3438. Artificial Sulphur Baths.

Sulphur baths ordinarily are made by simply dissolving potassium sulphuret in water, in the proportion of from $\frac{1}{2}$ an ounce to 2 ounces for every 40 gallons of water. But, in order to obtain a bath more closely resembling some of the more noted natural sulphurous springs which have proven so effectual in the treatment of rheumatism and skin diseases of certain types, proceed as follows:

Take of

Potassium (or sodium) sulphide..... 15 grains.
Sodium bicarbonate..... 20 grains.
Sodium chloride..... 4 grains.
Castile soap shavings..... 2 grains.
Alum 2 grains.
Calcium carbonate..... 2 grains.
Water 1 gallon.

These various materials are boiled in a sufficient quantity of water to dissolve them, and the solution is stirred about with a wooden or glass rod until an odor

of sulphuretted hydrogen becomes manifest. The solution is then poured into the patient's ordinary water bath, previously heated to about 96 degrees F.

3439. Beef Tea.

Take a thin, rump-steak of beef, lay it on a board and with a case-knife scrape it. Mix the red pulp obtained with 3 to 4 times its bulk of water, stirring until completely diffused; bring to slow boil on moderate fire; season to taste, and use without straining, giving 1 to 3 fluid ounces at a time.

3440. In-Growing Toe Nail.

Muriatic acid..... 1 dram.
Nitric acid..... 1 dram.
Chloride zinc..... 1 ounce.

Apply 1 drop to the affected part once a day. This gives instant relief to the pain caused by ingrowing toe-nail.

3441. Water Brash.

Powdered phosphate of zinc. 10 parts.
Calcined magnesia..... 3 parts.
Powdered vanilla..... 1 part.

Mix. A teaspoonful in a wineglass of water.

3442. Gall Stones.

Glycerine is said to be an excellent substitute for olive oil in the treatment of gall stones, a 10-gram dose in potash water generally relieving pain, while a 25-gram dose in most cases removes it.

3443. Mumps.

Magnesium sulphate..... 4 drams.
Water 4 ounces.
Tartar emetic..... 1 grain.
Spirit nitrous ether..... 3 drams.
White sugar..... 6 drams.

A teaspoonful every 3 hours, after the bowels have been well moved. Use flax-seed poultices locally.

3444. To Prevent Sore Nipples.

Apply a mixture of tannin and glycerine, 2 drams to the ounce, daily during the last month of pregnancy. This renders the nipples tough, but elastic.

3445. Sea-Sickness.

Caffeine 64 grains.
Sodium salicylate..... 48 grains.
Distilled water..... 160 minims.

Dissolve with the aid of a gentle heat. To be used hypodermically.

In the majority of cases the administration of 1 gram of either of the foregoing solutions allays vomiting, dispels nausea, headache and dizziness, and causes quiet sleep in from one-half to three-quarters of an hour.

3446. Sea-Sickness.

Atropine sulphate..... ½ grain.
Strychnine sulphate..... ½ grain.
Peppermint water..... 10 fl. drams.

To be used hypodermically.

Pills prepared with the two alkaloids of this formula and taken at the first approach of the symptoms of the disease, prevent its development.

3447. Sea-Sickness.

Chloral 3 grams.
Distilled water..... 50 grams.
Gooseberry syrup..... 60 grams.
French essence of pepper-mint..... 2 drops.

One-half at a draught. The preventive is the chloral.

3448. Cancer Powder, Esmarch's Painless.

Arsenious acid..... 10 grains.
Morphine hydrochlorate... 10 grains.
Calomel 80 grains.
Acacia 480 grains.

3449. Staphisagria Lotion.

Stavesacre seeds (in rough powder)..... 2 ounces.
Acetic acid..... 1 ounce.
Water, a sufficiency.
Alcohol 2 ounces.
Glycerine 1 ounce.

Mix the acetic acid with 10 ounces of water, add the stavesacre, boil for 10 minutes in a covered vessel, add the alcohol, stand till cold, strain or filter, add the glycerine, and make finished product 1 pint.

3450. Cod Liver Oil Jelly.

Five fluid ounces of cod liver oil, 2 drams of the best isinglass, and 1 fluid ounce of water are placed in a suitable vessel over a water-bath, and sufficient heat is applied to melt the isinglass; 1½ ounces of white powdered sugar, with which 4 drops each of oil of bitter almonds and oil of allspice, and 2 drops of oil of cinnamon (Ceylon) have been incorporated are now added, the vessel is removed from the fire and the mixture is stirred until it thickens. A firm jelly results, which keeps well in corked bottles.

3451. Creosote Mixture.

Creosote (beech wood)..... 3 drams.
Tincture gentian compound. 1 ounce.
Alcohol 8 ounces.
Sherry wine, enough to make..... 2 pints.

Dose, a tablespoonful in a wineglass of water 3 times a day.

3452. Creosote and Cod Liver Oil.

Creosote 2.5 grams.
 Cod liver oil..... 200. grams.
 Saccharin 0.1 gram.
 Take a teaspoonful to a tablespoonful,
 once, twice or thrice daily.

3453. Phosphorated Oil Emulsion.

Phosphorated oil..... 1 dram.
 Yolk of egg..... 2 drams.
 Solution potassa..... 1 dram.
 Syrup tolu..... 6 drams.
 Chloroform water, enough to
 make..... 6 ounces.
 Mix together the first two ingredients,
 then add the syrup and water, and lastly
 the solution of potash.

3454. Petroleum Emulsion.

Liquid petrolatum..... 16 ounces.
 Powdered acacia..... 8 ounces.
 Glycerine 4 ounces.
 Hypophosphite calcium.... 288 grains.
 Hypophosphite sodium.... 288 grains.
 Water, enough to make.... 3 pints.
 Add the acacia to the oil, and mix thor-
 oughly in a large mortar; then add 1 pint
 water (all at once) and rub briskly until
 the emulsion is formed. Dissolve the hypo-
 phosphites in a half pint of water, to
 which add the glycerine; then add all to
 the emulsion and rub well together, adding
 any water necessary to make up the meas-
 ure of 3 pints of finished product,

3455. Petroleum Emulsion.

Liquid petrolatum..... 4 ounces.
 Oil sweet almonds..... 2 ounces.
 Powdered acacia..... 1½ ounces.
 Glycerine 1½ ounces.
 Sodium hypophosphite... 128 grains.
 Calcium hypophosphite... 128 grains.
 Lime water, enough to
 make..... 1 pint.

3456. Emulsion of Balsam of Tolu.

Balsam of tolu..... 5 grams.
 Gum arabic (pulverized).... 10 grams.
 Orange flower water..... 10 grams.
 Syrup of lauro-cerasus.... 30 grams.
 Water 100 grams.
 The balsam is first melted with 10 grams
 of 80 per cent alcohol.

3457. Dr. Breen's Nerve Tonic.

Coca, No. 20 powder..... 8 ounces.
 Damiana 8 ounces.
 Gentian 8 ounces.
 Bromide potash..... 1¾ ounces.
 Salicylate soda..... 1 ounce.
 Dandelion root..... 8 ounces.
 Alcohol 1 quart.
 Glycerine 1 pint.
 Water, sufficient quantity. 1 gallon.

3458. Cure for Red Nose.

Zinc ointment..... 4 drams.
 Rice flour..... 1 dram.
 Sulphur 12 grains.
 Otto of rose..... 1 drop.
 Mix.



PART VI.

Household Formulas, Domestic Receipts, etc.

CLEANING PREPARATIONS: LIQUID.

3459. Chemical Erasine. Era.

Soft soap..... 3 ounces.
Potassium carbonate..... 6 drams.
Ammonia water..... 6 ounces.
Soft water, to make..... 96 fl. ounces.
Dissolve the soap in the water by the aid of heat, strain and add the potassium carbonate and the ammonia water.

3460. Cleansing Fluid.

Water of ammonia..... 2 ounces.
Conti. soap..... $\frac{1}{2}$ ounce.
Potassium nitrate..... $\frac{1}{2}$ ounce.
Rain water..... $1\frac{1}{2}$ pints.

3461. Cloth Cleaning Compound.

Glycerine $\frac{1}{2}$ ounce.
Alcohol $\frac{1}{2}$ ounce.
Sulphuric ether..... $\frac{1}{2}$ ounce.
Aqua ammonia..... 2 ounces.
Castile soap, powdered..... $\frac{1}{2}$ ounce.
Rain water to make..... 2 pints.

Use with brush or sponge and rinse with pure water.

3462. Electric Cleaning Compound. Era Prize.

Castile soap (white)..... 1 fl. ounce.
Ether 1 fl. ounce.
Glycerine 1 fl. ounce.
Ammonia (fort.) 2 fl. drams.
Pure water, to make..... 32 fl. ounces.

To 16 fluid ounces of water add in the following order the glycerine, ammonia and ether. Shake well and add enough water to measure 32 fluid ounces. Then add the soap (in fine shavings). Shake often for a few hours.

Directions: Place the article to be cleaned on a table or any flat surface, with a fold or two of cloth under the spot, wet a sponge with the fluid and rub hard for a few seconds; then wash with clean water.

3463. Eureka Renovator. Era.

Castile soap (white)..... 2 ounces.
Ammonia 8 ounces.
Sulphuric ether..... 2 ounces.
Alcohol 2 ounces.
Glycerine 2 ounces.
Oil gaultheria..... 2 drams.
Water (soft) q. s. add..... 1 gallon.

Dissolve the soap (by heat) in the water; also the oil gaultheria in the alcohol; then add the other ingredients in their proper order.

3464. Grease Eradicator.

Castile soap shavings.... 2 ounces.
Sodium carbonate..... 2 ounces.
Borax 1 ounce.
Ammonia 7 fl. ounces.
Alcohol 3 fl. ounces.
Oil of turpentine..... 2 fl. ounces.
Ether 2 fl. ounces.
Water, enough to make.. 64 fl. ounces.

Dissolve the soap in the water by means of heat, then add the other ingredients. In the first place, the oil of turpentine must be in form of an emulsion in order to remain suspended in this mixture, for it will not dissolve in it. This object may be accomplished by shaking the oil with a strong solution of the castile soap. This failing, use soft soap, 40 parts of a 1:10 solution to every 50 parts of oil of turpentine. The ether, in order to mix, must first be dissolved in the alcohol, the amount of which may possibly have to be augmented to 4 fluid ounces. Now dissolve the two sodium salts in part of the water, add the ammonia, then the turpentine emulsion, incorporate the spirit of ether, and finally make up the measure with water.

3465. Washing Fluid.

Soap 2 ounces.
Boiling soft water..... 1 gallon.
Stronger ammonia..... 4 ounces.

For a cheap washing fluid, and one easily made, this is one of the best.

3462.

REMOVAL OF STAINS AND GREASE SPOTS.

The following table gives, at a glance, the best means of cleansing all kinds of fabrics from any stain whatever. With this table, a few simple chemicals and a good deal of care and perseverance, anyone may set up a chemical cleansing establishment. Great pains must be taken when ether and benzin are employed to avoid their taking fire, their vapors, when mixed with air, being highly explosive.

KIND OF STAIN.	FROM LINEN.	FROM COLORED GOODS.		FROM SILKS.
		COTTON.	WOOLEN.	
Sugar, glue, blood and albumen.		Simple washing with water.		
Grease.		Soapsuds, alkaline lyes.	Lukewarm soapsuds.	Benzin, ether, ammonia, potash, magnesia, chalk, yolk of egg.
Varnish and oil paints.		Turpentine or benzin and soap.		Benzin, ether, soap; rub carefully.
Stearine.		Very strong alcohol, 95 degrees.		
Vegetable colors, red wine, fruit, red ink.		Sulphur vapors; warm chlorine water.	Wash out with warm soapsuds or ammonia water.	The same; rub gently and carefully.
Alizarine ink.		Tartaric acid; the older the stain the stronger the solution.	Dilute tartaric acid, if the stuff will bear it.	The same; with care.
Iron rust, and ink made of galls.		Warm oxalic acid solution; dilute hydrochloric acid; then tin turnings.	Repeated washings with a solution of citric acid, if the colors will bear it.	Nothing can be done, and all attempts only make it worse.
Lime, lye or alkalis.		Simply wash with water.	Drop dilute nitric acid upon it. The stain previously moistened, can be rubbed off with the finger.	
Tannin, green nut shells.		Javelle water; warm chlorine water; concentrated solution of tartaric acid.	Alternate washing with water and with more or less dilute chlorine water, according to the colors.	
Coal-tar, wagon grease.		Soap, oil of turpentine, alternating with a stream of water.	Rub with lard, then soap it well. After a time, wash alternately with water and turpentine.	The same; but use benzin instead if turpentine, and the water must fall on from some height.
Acids.		Red acid stains are destroyed by ammonia, followed by thorough washing with water. Brown stains of nitric acid are permanent.		

3467. Excelsior Cleaning Fluid.

Benzine, deodorized..... 1 quart.
 Alcohol 1 ounce.
 Bay rum..... $\frac{1}{8}$ ounce.
 Oil of wintergreen..... $\frac{1}{8}$ ounce.
 Ammonia $\frac{1}{8}$ ounce.
 Chloroform $\frac{1}{8}$ ounce.
 Sulphuric ether..... $\frac{1}{8}$ ounce.
 Borax $\frac{1}{8}$ dram.

3468. Grease Eradicator.

Equal parts ether, alcohol and water of ammonia. Use as follows: Place under the fabric to be cleaned a piece of blotting paper, moisten the sponge first with water, then with the grease eradicator, and rub and pat, when the grease will be immediately absorbed, partially saponified and absorbed by the blotting paper.

3469. Lightning Cleaner.

Castile soap..... 4 ounces.
 Powdered carbonate of sodium..... 2 ounces.
 Powdered borax..... 1 ounce.
 Water of ammonia..... 7 ounces.
 Alcohol 3 ounces.
 Spirit of turpentine..... 2 ounces.
 Ether 3 ounces.

3470. Washing Liquor.

Slice 1 pound white soap, stir it into 6 gallons of boiling water till dissolved, then add 2 ounces pearl ash, cool to a milk-warm temperature, and add 1 pound strong solution of ammonia.

3471. Benzine Jelly.

Cocoa soap..... 5 grams.
 Ammonia 8 cubic cent.
 Solution of potassa..... 4 cubic cent.
 Water, enough to make 30 cubic cent.

Dissolve the soap, with the aid of heat, in 10 cubic centimeters of water, add the ammonia and potassa solution, and sufficient water to make 30 cubic centimeters. To this saponaceous cream carefully add, in small portions at a time, 5,000 cubic centimeters of benzine.

3472. Benzine Paste for Taking Out Grease Spots.

Dissolve 12 parts of soap in 20 parts of boiling water, and after cooling somewhat add 3 parts strongest ammonia water. Stir, and add, little by little, sufficient deodorized benzine to make 100 parts. The result is a gelatinous paste that is very efficacious in removing grease. It may be perfumed, if desired, with a little oil of wintergreen or bergamot. All soaps do not give equally good results. The best are obtained from soaps containing an excess of alkali.

3473. Cleansing Cream.
Era.

Oleic acid..... 1 part.
 Borax 2 parts.
 Oxgall, fresh..... 5 parts.
 Tallow soap..... 20 parts.

Triturate the borax with the oxgall, then thoroughly incorporate with it the soap, previously reduced to powder, and lastly incorporate the oleic acid.

3474. Cleansing Cream.
Era.

Extract quillaja..... 1 ounce.
 Borax 1 ounce.
 Oxgall, fresh..... 4 ounces.
 Tallow soap..... 15 ounces.

Triturate the borax with the extract of quillaja, and afterwards with the oxgall, which will cause at least partial solution. Then thoroughly incorporate with it the soap so as to produce a plastic mass, which may be molded into sticks or put into boxes. If no extract of quillaja is at hand, soap bark in shreds may be exhausted with boiling water, and the liquid evaporated on a water-bath. One hundred parts of bark yield about 20 parts of extract.

3475. Gasoline Cream.
Era.

Tincture soap bark..... 12 fl. drams.
 Benzine to make..... 8 fl. ounces.

Mix and shake for half an hour, then allow to stand 12 hours to solidify.

3476. Gasoline Cream.

Infusion soap bark (20 per cent)..... 4 fl. drams.
 Benzine 2 fl. ounces.

Proceed as above.

3477. Household Ammonia.

Sodium carbonate..... $5\frac{1}{4}$ pounds.
 Concentrated ammonia.... 8 pints.
 Water 12 pints.

These are mixed with the clear solution decanted after standing 2 or 3 days.

3478. Household Ammonia.

Soap (in fine shavings)..... 2 ounces.
 Potash lye..... 1 ounce.
 Water of ammonia..... 2 pints.

A small quantity of alcohol is sometimes added to render the mixture clear, and the amount of soap is frequently decreased.

3479. Howe's Economic Renovator.
Era.

Common soap shavings..... 2 ounces.
 Crude potassium carbonate 1 ounce.
 Powdered borax..... 1 ounce.
 Ammonia water..... 2 fl. ounces.
 Soft water, to make..... 1 pint.

Heat the water to boiling, digest in it the soap, then add the borax and potassium

carbonate, agitate until dissolved, and strain when cool, add the ammonia water and cork well.

Use for garments.—Place a small quantity upon a sponge and rub it briskly upon the spotted garment; then wash with fresh water.

Use for wood.—Same as above, but diluted somewhat with water.

3480. Japanese Cleaning Cream.

Castile soap.....	3 ounces.
Water	1 gallon.
Ammonia	6 ounces.
Alcohol	3 ounces.
Ether	3 ounces.
Glycerine	2 ounces.
Oil of citronella or myr- bane.....	10 drops.

3481. Washing Powder.

Mix together, to coarse powder, 40 pounds of common soda, 20 pounds caustic soda, 15 pounds silicate of soda, 2 pounds palm oil, 20 pounds water.

3482. Washing Powder.

Sal soda, partially effloresced	2 parts.
Soda ash.....	1 part.

3483. Washing Powder.

Sal soda, partially effloresced	6 parts.
Soda ash.....	1 part.
Yellow soap, in coarse pow- der.....	1 part.

3484. Washing Powder.

Sal soda, effloresced.....	6 parts.
Crude potash.....	3 parts.
Borax	1 part.

3485. Washing Powder.

Sal soda,	
Borax,	
Yellow soap,	
Of each equal parts.	

3486. Washing Powder.

Sal soda, partially effloresced	5 parts.
Quillaja	1 part.

GREASE, TO REMOVE FROM FABRICS, GLOVES, ETC.

3487. Balls for Cleaning.

Common soap, 1 pound; oxgall, $\frac{1}{2}$ pound; Venice turpentine, 1 ounce.

3488. Balls for Cleaning.

Shavings of soap, $1\frac{1}{2}$ pounds; oxgall, $\frac{1}{2}$ pounds; honey, 1 ounce; sugar, $1\frac{1}{2}$ ounces; turpentine, $\frac{1}{4}$ ounce.

(To remove pitch, wax, paint, etc.) White soap, 15 ounces; pure potash, 3 ounces; oil of turpentine, 2 ounces.

3489. Grease Spots, to Remove.

Take benzine, 20 ounces; alcohol (strong), 5 ounces; ether, 2 drams; ammonia, 1 dram.

3490. Grease Spots, to Remove.

(Javelle water.) Take bleaching powder, 1 ounce; carbonate of potassa, 1 ounce; water, 33 ounces. Triturate the bleaching powder in the cold with 25 ounces of water, then add the carbonate of potassa, previously dissolved in the rest of the water; shake well and let it settle. The supernatant liquor is filtered, if necessary, and mixed with 1 ounce of hydrochloric acid, when it is ready for use.

3491. To Remove Axle Grease.

If spots of axle grease, varnish, etc., are not completely removed from clothes by the application of benzine, place the garment upon a flat cake of plaster of Paris or upon some folds of blotting paper, moisten it with some sulphuric ether and rub gently with a soft brush or clean cotton rag. If necessary, repeat. This must be done by day only, the ether vapors being exceedingly inflammable and dangerous to handle where there is an open fire or light or hot stove.

3492. To Remove Tar, Axle Grease, Etc.

White cottons and linens.—Soap, oil of turpentine and water, each applied in turns.

3493. To Remove Tar, Axle Grease, Etc.

Colored cottons and woollens.—First smear with lard, rub with soap and water, and let it stand a short time; then wash with oil of turpentine and water alternately.

3494. To Remove Tar, Axle Grease, Etc.

Silks.—The same, using benzine instead of turpentine, and dropping the water from a certain height on the under side of the stain. Avoid rubbing.

3495. Balls for Scouring—Breeches Balls, Clothes Balls.

Pipe clay.....	4 ounces.
Fuller's earth.....	$\frac{1}{2}$ ounce.
Whiting	$\frac{1}{2}$ ounce.
White pepper.....	$\frac{1}{4}$ ounce.
Oxgall, sufficient to form it into a paste.	

3496. Balls for Scouring—Breeches Balls, Clothes Balls.

Pipe clay.....	3 ounces.
White pepper.....	1 dram.
Starch	1 dram.
Orris powder.....	$1\frac{1}{2}$ drams.

It may be kept in powder, or formed into balls as above.

3497. Balls for Scouring—Breeches Balls, Clothes Balls.

Bath brick..... 4 parts.
 Pipe clay..... 8 parts.
 Pumice 1 part.
 Soft soap..... 1 part.

Ochre, umber or other color to bring
 it to the desired shade, q. s.

Oxgall, to form a paste.

Make it into balls and dry them.

3498. Blankets, to Clean.

When soiled, they should be washed, and not scoured, which latter they will be if sent to the scourer's. Shake all the dust from them, plunge them into plenty of hot soap-suds, let them lie till the hands can be borne in the water, wash quickly, rinse in new, clean, hot suds, shake thoroughly, stretch well, dry, and they will be as nice as new.

3499. Calico and Linen, to Clean.

When discolored by age or washing, restore the whiteness by bleaching in the sun, out of doors.

3500. Calico and Linen, to Clean.

Lay the linen for 12 hours in a lye made of 1 pound of soda to a gallon of boiling, hot soft water; then boil for a half hour in the same liquid. Next make a mixture of chloride of lime with 8 times its quantity of water, which must be well shaken in a stone jar at intervals for 3 days; then allow to settle, and being drawn off clear, the linen must be steeped in it for 36 hours, and then washed out in the ordinary way.

3501. To Remove Grease From Carpets.

Mix a little soap into a gallon of warm soft water, then add $\frac{1}{2}$ ounce of borax; wash the part well with a clean cloth.

3502. Carpet Cleaning Composition.

For cleaning carpets on the floor, use 1 pint oxgall to a pailful of water; after washing apply cold water to rinse out the oxgall, and finally sponge as dry as possible.

3503. To Clean Carpets.

If brooms are wet with boiling suds once a week they will become very tough, will not cut a carpet, and will last much longer. A handful or so of salt sprinkled on a carpet will carry the dust along with it and make the carpet look bright and clean. A very dusty carpet must be cleaned by dipping the broom in cold water, shaking off all the drops, and sweeping a yard or so at a time. Wash the broom and repeat until the entire carpet has been swept.

3504. Floors, to Clean.

Scatter with clean sifted white or silver sand. Sprinkle sand with a solution of one pound American potash to one pint of water. Scrub the boards lengthwise with a hard brush, using very hot water and best mottled soap. Change the water frequently. Ink stains may be removed by rinsing with strong vinegar.

3505. Floors, to Extract Paraffin Oil From.

Apply a strong, hot solution of oxalic acid, and afterwards use the scrubbing brush.

3506. Cleaning and Restoring Inlaid Floors.

Boil 1 part of calcined soda with 1 part of slaked lime and 16 parts of water for forty-five minutes, and with the lye thus made mop up the floor. When nearly dry scrub the latter with a stiff brush, with fine sand and water to remove old wax, grease, etc. Wipe off and give a coat of dilute sulphuric acid (acid, 1 part; water, 8 parts). Let dry, rinse off with plenty of water, again let dry, and finish with wax in the usual manner.

3507. Glove Cleaner.

Take fine curd soap, one pound, scrape it into a fine powder, put into a jar and pour upon it from time to time sufficient strong alcohol to make it into a thick jelly; add one teaspoonful of ether or one half teaspoonful liquor potassa, mix and put into bottles well corked. To use, put the gloves on the hand, rub on the preparation with a piece of flannel, when the dirt will disappear.

3508. Glove Cleaner.

Strong solution ammonia.. $\frac{1}{2}$ ounce.

Solution chlorinated soda.. 8 ounces.

Distilled water 9 ounces.

Yellow soap in fine shreds. 12 ounces.

Make into a paste, and apply with a clean piece of flannel.

3509. Glove Cleaner.

Lay the gloves upon a clean board, make a mixture of dried Fuller's earth and powdered alum, and pass them over on each side with a stiff brush. Then sweep the dust off and sprinkle them well with dry bran and whiting and dust them well.

3510. Glove Cleaner.

White soap $4\frac{1}{2}$ drams.

Hot water $2\frac{1}{2}$ drams.

Rub into a paste and add

Solution of chlorinated

soda $2\frac{1}{2}$ drams.

Water of ammonia.....20 minims.

3511. Glove Cleaner.

Add 15 drops of strongest solution of ammonia to spirit of turpentine, $\frac{1}{2}$ pint. Having fitted the gloves on wooden hands, apply this mixture with a brush. Follow up this application with some fine pumice powder. Rub with some flannel or sponge dipped in the mixture. Rub off the pumice and repeat the same process twice or thrice. Hang in the air to dry and when dry place in a drawer with some scent. Benzol is largely used as a glove cleaner.

3512. Glove Cleaner.

To clean kid gloves, have ready a little new milk in one saucer, a piece of white soap in another, and a clean cloth folded 2 or 3 times. On the cloth spread out the glove smooth and neat. Take a piece of flannel, dip it in the milk, then rub off a good quantity of soap on the wetted flannel, and commence to rub the glove toward the finger, holding it firmly with the left hand. Continue this process until the glove, if white, looks of a dingy yellow, though clean; if colored, till it looks dry and spoiled. Lay it to dry, and the operator will soon be gratified to see that the old glove looks nearly new. It will be soft, glossy, smooth and elastic.

3513. Kid Glove Cleaner (Jouvin's).

Javelle water..... $8\frac{1}{2}$ fl. ounces.
Water of ammonia..... $\frac{1}{2}$ fl. ounce.
Powdered castile soap. $12\frac{1}{2}$ ounces.
Water $9\frac{1}{2}$ fl. ounces.

Stand until a jelly forms, then use with a piece of flannel.

3514. Glove Powder.

Castile soap, dried by exposure to a warm, dry atmosphere for a few days, and then reduced to fine powder in a mortar.

3515. Glove Powder.

Pipe clay, colored with yellow ochre, umber or Irish slate, quantity sufficient, and afterward scented with a little powdered orris root, or cloves. Used to clean gloves made of doeskin and similar leather.

3516. Hubs, to Remove Grease From.

Rub the parts with a rag saturated with kerosene, after which rub and thoroughly dry with clean cotton waste.

3517. Grease Spots, to Kill Before Painting.

Give the surface a wash with saltpetre in solution or very thin lime white-wash. Soapsuds, if used, must be well rinsed off or the paint will not dry over it.

3518. To Remove Stains of Oil Paint.

Use bisulphide of carbon or spirits of turpentine, and if dry and old, chloroform.

For the latter, as well as tar spots, cover them with olive oil or butter. When the paint is softened, the whole may be removed by treatment, first with spirits of turpentine, and then with benzine.

3519. Oil Stains on Paper.

Apply pipe clay, powdered and mixed with water to the thickness of cream; leave on for four hours.

3520. Oil Stains on Paper.

Oil or fat stains, even when old, may be removed from paper or similar fabrics by means of a mixture of benzol and magnesia. Calcined magnesia is mixed with sufficient quantity of benzol to produce a mass which becomes granular after a while. A little of this mixture is rubbed with the finger upon the stain, and the little granules of magnesia afterward wiped off. Fresh stains usually disappear entirely, old ones after a short time, particularly if the treatment is repeated two or three times. A great advantage of this method is that it may be used upon the finest kind of paper and that it scarcely affects printed paper; prolonged contact only rendering the printing paler. The mixture should be preserved in well-closed glass-stoppered vials.

3521. To Remove Grease Stains From Paper.

Warm the stained paper, lay blotting paper upon the stained spot and press it gently with a hot iron. Or, heat rectified oil of turpentine to the boiling point and cover both sides of the stain until it can no longer be seen. Then dip a small brush in strong spirit of wine and brush the spot several times where the stain has been. This restores the original whiteness of the paper, and, when ironed, gives it smoothness and lustre.

3522. Paper, to Remove Stains From.

The process must depend on what the stains are. If they are those of writing ink, a solution of citric, tartaric, or oxalic acid will be successful. If grease, take a heated iron and press it upon blotting paper placed on the stains. After this process has been frequently repeated, take a soft brush and apply oil of turpentine to the stains on both sides of the paper; lastly, with a clean brush, apply to the spots already almost gone rectified spirit of wine.

3523. Tar or Pitch on the Skin.

Rub well with pulverized licorice mixed with oil of anise, to the consistency of cream, and lastly wash with soap and water.

3524. To Remove Tar, Grease, Oil and Varnish From Silk.

Rub the stain with a white cloth moistened with a mixture of equal parts of oil of turpentine and ether, until no impure matter adheres to it. Cover the stain about the thickness of a knife blade with pulverized white bole, upon which place blotting paper and press a hot iron. Repeat until the stain has disappeared.

3525. Grease Spots, to Take Out of Silk.

Take a lump of magnesia and rub it wet over the spot; let it dry, then brush the powder off, and the spot will disappear; or, take a visiting card, separate it, and rub the spot with the soft internal part, and it will disappear without taking the gloss off the silk.

3526. Chamois Skin, to Clean.

Rub well over with soft soap until clean. Rinse in warm water, to which soda has been added, and use yellow soap. After rinsing, wring well in a rough towel, dry quickly, rub and work well in hands to soften.

3527. Chamois Skin, to Clean.

Keep a wet towel lying on its face until the dirt is thoroughly softened, say three or four days, occasionally rubbing off with a sponge; then rub with clear nut or linseed oil.

3528. Wash Leather, to Cleanse.

Wash the soiled polishing leather in a weak solution of soda and warm water, then rub a good deal of soap into the leather and let it soften for two hours. It is afterwards thoroughly washed until perfectly clean, and rinsed in a weak solution of warm water, soda, and yellow soap. It must not be washed in water alone, or it will become so hard when dry that it cannot be used again. It is the small quantity of soap remaining in the leather which penetrates its smallest particles and makes the leather as soft as silk. After the rinsing, it is wrung out in a coarse towel and dried quickly. It is then pulled in every direction and well brushed, after which it is softer and better than most wash leather when first bought. If rough leather is used to finish highly polished surfaces, it will be often observed that the surface is scratched or injured. This is caused by particles of dust, and even grains of hard rouge that were left in the leather. As soon as they are removed with a clean brush and rouge, a perfectly bright and beautiful finish can be obtained.

3529. Hair Brushes, to Clean.

Dissolve a piece of soda the size of a walnut in a quart of water. After combing out the hair from the brushes, dip them, bristles downward, in and out of this solution, keeping the backs and handles as free from the water as possible. Repeat this until the brushes look clean. Then rinse in cold water, shake well and wipe the backs and handles with a towel, but not the bristles, as it makes them soft, as does also the use of soap. Set the brushes in the sun or near a gentle fire.

3530. Paint Brushes, to Clean.

Clean with turpentine, pressing out all particles of color upon a marble slab, and then suspend in jars of water, not allowing them to touch the bottom. Change the water twice a week.

3531. Paint Brushes, to Clean.

To clean old paint brushes which have become hard with paint, soak the brushes 24 hours in raw linseed oil; then rinse in hot turpentine, repeating the process until clean.

LAUNDRY BLUE, STARCH, ETC.

3532. Laundry Blue.

Dissolve indigo sulphate in cold water and filter.

3533. Laundry Blue.

Soluble blue	2 drams.
Oxalic acid	½ dram.
Water	2 pints.

3534. A Disinfective Laundry Blue.

Mix together 16 parts of Prussian blue, 2 parts of carbolic acid, 1 part of borax, and 1 part of gum arabic into a stiff dough. Roll it out into balls as large as hazel nuts, and coat them with gelatin or gum, to prevent the carbolic acid from escaping.

3535. Liquid Wash Blue.

Pulverize 8.3 parts of solid indigo in a porcelain dish, and add 33½ parts of sulphuric acid. Let it stand for six hours with frequent stirring with a wooden or glass rod, and pour into a flask containing one-half gallon of water, not too cold. Throw powdered chalk into the flask until effervescence ceases, in order to remove the sulphuric acid, which is injurious to the clothes. The whole is then allowed to stand quietly for a few days, then filtered through blotting paper, and can be kept for years without fear of spoiling.

3536. Soluble Blue.

Pure soluble Prussian blue is prepared by digesting an excess of Prussian blue paste with a saturated solution of oxalic acid. The filtrate, after standing for two months, deposits the pure blue, the liquid itself becoming colorless. The color is washed with weak alcohol and dried. It now dissolves readily in pure water. The same result is obtained more rapidly by precipitating the oxalic acid solution with 95 per cent alcohol, or a concentrated solution of soda, and washing the color with weak alcohol. Tartrate or oxalate of ammonium can take the place of the oxalic acid in the above reactions. On boiling the oxalic acid solutions, ordinary insoluble blue is precipitated. Dilute sulphuric acid also precipitates the insoluble modification.

3537. Starch Gloss.

Spermaceti, gum senegal and borax, each 1 part, glycerine $2\frac{1}{2}$ parts, and $24\frac{1}{2}$ parts of water. Two or three teaspoonfuls are to be added to $\frac{1}{4}$ of a pound of boiled starch.

3538. Glazing Starch.

Melt 5 parts of stearic acid, add 5 parts of absolute alcohol, and triturate the mixture with 95 parts of wheat starch. Starch prepared from this takes easily a fine polish. The effect is the same as adding a piece of stearin to the starch before the boiling water is poured upon it.

CLEANING WALLS, ETC.

3539. To Clean Papered Walls.

Wipe papered walls down with a flannel cloth tied over a broom or brush. Then cut a thick piece of stale bread with crust on, and rub them down with this. Begin at the top and go straight down.

3540. Cleaning Wall Paper.

Take fresh made dough from white flour to which has been added a few drops of water of ammonia. Go carefully over the paper and as the dirt accumulates on the outside of the dough work it to the inside, and as the ammonia evaporates, add a few drops from time to time.

3541. Wall Paper, to Extract Grease Stains From.

Oil marks can be taken from the paper on drawing-room walls, and marks where people have rested their heads, by mixing pipe clay with water to the consistency of cream, laying it on the spot, and letting it remain till the following day, when it may be easily removed with a penknife or brush.

3542. Grease on Wall Paper, Removing.

Lay several folds of blotting paper on the spot and hold a hot iron upon it until the grease is absorbed.

3543. Composition for Cleaning Wall Paper.

Mix together 1 pound each of rye flour and white flour into a dough, which is partially cooked and the crust removed. To this 1 ounce of common salt and $\frac{1}{2}$ ounce of powdered naphthaline are added, and finally 1 ounce of corn meal and $\frac{1}{4}$ ounce of burnt umber. The composition is formed into a mass, of the proper size to be grasped in the hand, and in use it should be drawn in one direction over the surface to be cleaned.

3544. Walls, Smoky, to Clean.

Brush well, wash with a strong solution of pearlash, rinse at once with clean water. Then give the wall, when dry, a thin coat of fresh slaked lime, with considerable alum dissolved in hot water added. After this has dried apply whiting and gold size.

INK STAINS, TO REMOVE.

3545. To Remove Ink Stains.

One ounce solution chloride of lime, and 2 drops of acetic acid, makes a fluid that will remove ink marks or stains.

3546. To Remove Ink Spots.

Take a thick blotting paper or board, steep it several times in a solution of oxalic acid or oxalate of potassium. Then dry it. If there is a spot to be taken away, apply the blotter, which has been prepared in this fashion, to the same.

3547. To Remove Ink From Carpets.

First take up as much as possible of the ink with a teaspoon. Then pour cold sweet milk upon the spot and take up as before, pouring on milk until at last it becomes only slightly tinged with black. Then wash with cold water and absorb with a cloth without too much rubbing.

3548. To Remove Ink and Rust Stains.

Tartaric acid.....	10
Alum	10
Water, quantity to make a solution.	

3549. Alizarine Ink Stains.

White cotton and flens. Tartaric acid in solution; the older the stain, the more concentrated the solution should be.

3550. Alizarine Ink Stains.

Colored cottons and woollens, and silks. A weak solution of tartaric acid, if the color allows of its use.

3551. Ink Stains, to Remove From Books.

First wash the paper with warm water, using a camel's hair pencil for the purpose. By this means the surface ink is got rid of; the paper must now be wetted with a solution of oxalate of potash, or, better still, oxalic acid, in the proportion of 1 ounce to $\frac{1}{2}$ pint of water. The ink stains will immediately disappear. Finally, again wash the stained place with clean water, and dry it with white blotting water.

3552. "Eneivoir," or Liquid to Remove Ink Spots.

Tartaric acid..... 10 parts.
Alum 10 parts.
Distilled water..... 10 parts.

3553. To Remove Ink Stains From Silk

Moisten the stain with strong white wine vinegar and rub some warm beechwood ashes upon it and finally wash with soap water. Should the color suffer from the vinegar mix some beef gall and water and wash the stain with it.

3554. To Remove Ink Stains From Wood.

Prepare a mixture of 8 ounces of concentrated sulphuric acid and $1\frac{3}{4}$ pints of water. Scour the stain thoroughly with water and sand, then pour some of the mixture upon it and rub until the stain has disappeared.

3555. Indelible Ink Stains.

The staining principle of common indelible ink is nitrate of silver, and may be removed by first soaking in a solution of common salt, which produces chloride of silver, and afterwards washing with ammonia, which dissolves the chloride.

3556. Indelible Ink Stains.

The stains may also be removed by a solution of 10 grains of cyanide of potassium and 3 grains of iodine to an ounce of water; or a solution of 8 parts of bichloride of mercury and muriate of ammonium in 125 parts of water.

3557. Indelible Ink Stains.

A solution iodide of potassium will freely dissolve iodine. Silver stains moistened for a while with this solution will be converted into iodide of silver, which is soluble in iodide of potassium. The stains will have disappeared when the cloth, after the foregoing treatment, is washed in water.

3558. Indelible Ink Stains.

Wash the stained cloth with a concentrated solution of sulphate or chloride of zinc, and then touch with a piece of metallic zinc. After the color has disappeared, the cloth is first washed with pure water and then with water and soap.

3559. Indelible Ink Stains.

Chloride of copper completely removes, even from colored woven cotton tissues, stains occasioned by nitrate of silver; the tissue is afterwards washed with a solution of hyposulphite of sodium, and next thoroughly washed with water. From white cotton and linen tissues, the stains are more readily and effectually removed by applying dilute solution of permanganate of potassium with hydrochloric acid, followed by washing with hyposulphite of sodium solution, and rinsing in plenty of fresh water. By these means the use of the highly poisonous cyanide is rendered unnecessary.

REMOVING RUST AND FRUIT STAINS.

3560. Rust Stains.

A mixture of two parts of powdered cream of tartar with one part of powdered oxalic acid will remove stains from cotton and linen. This mixture is sometimes sold under the name of salts of lemon. The poisonous character of the acid must not be overlooked, for accidents have occurred from its careless use.

3561. Ink and Rust Stains.

Instead of using oxalic acid, which attacks the fiber of the texture, rub on a mixture of two parts of cream of tartar and one of powdered alum.

3562. Rust Stains on Clothing.

Moisten the spot with a solution of an alkaline sulphide, when it will turn black. After a few minutes rinse with water, and treat with a dilute solution of hydrochloric acid, and again rinse well with water. In the case of old stains it may be necessary to repeat the operation several times.

3563. Rust Stains on Clothing.

Treat the spot with a solution consisting of water, one fluid ounce; ferrocyanide of potassium, one grain; dilute sulphuric acid, 8 minims; which will convert the iron into Prussian blue. Rinse with water, treat with a weak solution of potassa or soda to dissolve this compound and finally wash well with water.

3564. Rust Stains on White Goods.

Soak the stains in a solution of tin chloride and rinse immediately with much water. The tin salt is much more reliable in removing iron rust, and quicker in its action than oxalic acid, unless the stains are soaked in a solution of the latter, contained in a tin spoon, when the stains disappear in a shorter time.

3565. Rust and Nut Gall Ink Stains.

White cotton and linens. Warm solution of oxalic acid, dilute muriatic acid, followed by granulated tin.

Colored cottons and woollens. Repeated washings with a solution of citric acid, if the color is fast.

Silks. Do nothing; all attempts only make things worse.

3566. Rust on Metals.

Cover the metal with sweet oil well rubbed in and allow to stand 48 hours; smear with oil applied freely with a piece of cotton wool, after rubbing the steel. Then rub with finely powdered slaked lime.

3567. Rust on Metals.

Rub slightly on with the finger a small quantity of the dry powder of magnesia, allowing it to remain for an hour or two, then brush off.

3568. Rust on Metals.

To remove rust from iron or steel utensils the following solution is applied by means of a brush, after having removed any grease by rubbing with a clean, dry cloth; 100 grams stannic chloride are dissolved in 1 liter of water; this solution is next added to one containing 2.5 grams tartaric acid dissolved in 1 liter of water, and, finally, adding 20 cubic centimeters indigo solution diluted with 2 liters of water. After allowing the solution to act upon the stain for a few seconds, it is rubbed clean with a moist cloth; to restore the polish, use is made of silver sand and jewelers' rouge.

3569. Wine and Fruit Stains.

White cotton or linen, fumes of burning sulphur, warm chlorine water.

Colored cotton or woollens, wash with tepid soapsuds or ammonia.

Silks, the same with very gentle rubbing.

3570. Fruit Stains.

Pour boiling water on chloride of lime, in the proportion of 1 gallon to $\frac{1}{4}$ pound; bottle it, cork it well, and in using be careful not to stir it. Lay the stain in this for a moment, then apply white vinegar and boil the table linen.

3571. Mildew, Wine or Fruit Stains on Silk or Linen.

Cut 1 pound of ordinary good soap into shavings and boil into a stiff paste with rain water. Apply this to the stain and scatter upon it some finely powdered potash. Then spread the goods upon a grass plat and allow them to remain there for 24 hours. When dry sprinkle some rain water upon the stain and wash, when the stain will have disappeared.

3572. Aniline Stains.

Dissolve 7 parts sodium nitrate in 15 parts dilute sulphuric acid and 500 parts water; let stand 24 hours. Apply with camel's hair brush, rinse thoroughly.

3573. Tannin and Walnut Shell Stains.

White cottons and linens. Javelle water, warm chlorine water, concentrated solution of tartaric acid.

Colored goods or silks. Chlorine water diluted according to the tissue and its color, each application to be followed by washing with water.

3574. Cleaning Marble.

Pure beeswax 10 parts.

Japan gold size..... 2 parts.

Spirit of turpentine..... 88 parts.

Apply, in small pieces, with white flannel.

3575. Marble, to Remove Grease From.

Apply a little pile of whiting or fuller's earth, saturated with benzine, and allow it to stand some time.

3576. Marble, to Clean.

Mix with water 5 parts soda, $2\frac{1}{2}$ parts powdered chalk, $2\frac{1}{2}$ parts pumice stone (powdered). Wash the spots with this mixture; then wash off with soap and water.

3577. To Extract Oil From Marble or Stone.

Soft soap, $1\frac{1}{2}$ parts; fuller's earth, 3 parts; potash, $1\frac{1}{2}$ parts; boiling water to mix; apply to the grease spots and let it remain two or three hours.

3578. Marble, to Remove Oil Stains in.

Stains in marble caused by oil can be removed by applying common clay saturated with benzine. If the grease has remained long enough it will become acidulated, and may injure the polish, but the stain will be removed. Boil $\frac{1}{2}$ pound soft soap in 1 quart water, very slowly, until the water is reduced to 1 pint. Apply this in the same manner as the preceding.

3579. Cleaning Marble.

Cover the soiled part with a paste of quick lime moistened with a strong aqueous solution of sal soda for several hours; then remove the paste, wash the parts thoroughly and polish if necessary.

3580. Cleaning Marble.

If the marble is white, coat it with gum arabic and expose to the sun. When it peels off wash with water or make a paste with fuller's earth and hot water, cover the spots therewith, let it dry on, and next day scour off with soft soap. The luster can be restored by rubbing with a dry cloth.

3581. To Take Stains From White Marble.

Turpentine, $2\frac{1}{4}$ tablespoonfuls; lye, $1\frac{1}{2}$ gills; oxgall, $1\frac{1}{2}$ ounces; pipe clay, quantity sufficient to make a paste. Apply the paste to the stain and let it remain for several days. Iron mold or ink spots may be taken out by dissolving in $1\frac{1}{2}$ pints rain water, $1\frac{1}{2}$ ounces oxalic acid, $\frac{3}{4}$ ounce butter antimony, flour sufficient to make the mixture of the proper consistency. Put on with a brush, let it remain a few days, wash off. Grease spots may be removed by applying common clay saturated with benzine.

CLEANING THE HANDS.

3582. How a Druggist Should Cleanse His Hands.

When the hands have been stained by strong alkaline solutions, they should be washed in some dilute acid—citric, oxalic or acetic (1 to 100 of water). If soap without water is then immediately applied, fatty acids are deposited in the skin, which thus becomes liable to crack. The effects of lime solutions and also of strong ammonia may be prevented in the same way. After using mineral acids, the hands should be washed with water and rubbed while wet with a piece of soap. If the acid was very strong or has affected a large surface, they should be bathed, after washing, in a weak solution of soda (1 to 100). Strong sulphuric acid is first to be washed off, as far as possible, with plenty of water, after which soap should be employed as above directed. If water is used abundantly there is no danger of too much heat being evolved. When the acid has caused severe burns, the affected parts may be covered with a paste composed of magnesia, carbonate of magnesium, or bicarbonate of sodium, with a little water.

Nitric acid is removed by the same process. Burns by this acid, especially when treated with alkaline agents, are apt to leave behind a yellowness of the affected integument. Nitric acid destroys the epidermis so quickly that it can hardly ever be restored to a normal condition, and the same is the case with the fumes, also with those of nitro-muriatic acid, bromine and chlorine. Iodine stains should be treated with a solution of thiosulphate (1 to 10 of water). When the hands have been exposed for a long time to the action of carbolic acid, wash them first with alcohol—which may be used several times over for this purpose—and then with soap; after which, without being dried, they may be rubbed with lanolin. After working with sublimate solutions, it is best to bathe the hands for some time in a solution of common salt (1 to 50 of water); followed by soap and lanolin.

3583. To Clean the Hands.

Rub them with a slice of lemon, or, still better, add a little oxalic acid to the lemon juice. The hands should be first washed with soap and water, and well rinsed; then the substances mentioned above should be well rubbed in, and the hands washed in soft water without soap.

CLEANING PAINTINGS, ENGRAVINGS, ETC.

3584. Engravings, to Clean.

Expose them to the fumes of muriatic acid and wash well in water. To take out ink spots use aqua fortis, which dilute with water as soon as the action appears to be sufficient. Dry with blotting paper, wash any dry once more. A bath in water, in which a little potash has been stirred, will finish the process, neutralizing any of the acid that may remain.

3585. Paintings, to Clean.

Dissolve a little common soda in wine, add a grated potato and a little salt; rub this well over the painting until clean. Wash off in spring water and dry with a clean cloth.

3586. Cleaning Powder for Windows.

Moisten calcined magnesia with pure benzine sufficiently to let a drop form when pressed. A little of the mixture is placed on a wad of cotton and applied to the glass plate. It may also be used in cleaning mirrors. Do not use near a fire or light, as the benzine vapors are very inflammable and explosive.

3587. Window Polishing Paste.

Prepared chalk..... 90 parts.
 White bole..... 5 parts.
 Armenian bole..... 5 parts.
 Rub together into a paste with
 Water 50 parts.
 Spirit 25 parts.

The paste is to be rubbed on the window, allowed to dry, and then rubbed off with cloths.

3588. To Clean the Globes on Gas Fixtures.

If the globes on a gas fixture are much stained on the outside by smoke, soak them in tolerably hot water, in which a little washing soda has been dissolved. Then put a teaspoonful of powdered ammonia in a pan of luke-warm water, and with a hard brush scrub the globes until the smoke stains disappear. Rinse in clean cold water. They will be as white as if new.

3589. Greasy Bottles.

Wash with benzine or a solution of permanganate of potassium to which has been added some concentrated hydrochloric acid. The disengaged chlorine destroys the fatty matter. Bottles that have contained resinous substances are washed with potash or soda and rinsed with alcohol, while those having contained essences are washed first with sulphuric acid, then with water.

3590. Cleaning Glassware.

Many glass bottles are thrown away which might be easily cleaned by filling them with a solution of potassium bichromate and sulphuric acid in about the proportions given for battery fluid in the National Formulary. It would be well to keep a solution on hand, which can be used repeatedly. The bottles to be cleaned should be filled with the solution or immersed in it for a short time, when on rinsing they will be perfectly clean.

3591. Cleaning Cover Glasses.

Dissolve a pinch of chromic acid in about 1 dram of water in a wide, flat-bottomed vessel, add 2 fluid ounces of sulphuric acid, and place the cover glasses, each separately, into the liquid. After an hour pour off the liquid, wash the glasses several times with water, and then cover them with a mixture of 1 volume of hydrochloric acid and 3 volumes of alcohol, and lastly with perfectly pure ether, dried by means of calcium chloride. Lastly, the glasses are placed on a sheet of smooth white paper spread out by means of a small glass rod, and as soon as dry (after about five minutes) transferred into a box.

3592. Cleaning Cover Glasses.

Place the cover glasses, immediately after use, into concentrated sulphuric acid. When a sufficient quantity has been collected together, add some more of the acid, and warm for some time. Then pour off the acid, wash well with water, next with absolute alcohol, and lastly with ether.

CLEANING BRASS, SILVER, OILCLOTH, ETC.

3593. Putz-Rags.

Four parts of castile soap are dissolved in 20 parts of water; the solution mixed with 3 parts of tripoli, and tinted with fuchsin or corallin. Woolen rags are now dipped in the mixture, which must be stirred continuously, the excess of the mixture wrung out, and the rags dried. The tripoli must be in an impalpable powder.

3594. Brass or Copper, to Clean.

Mix together one ounce oxalic acid, 6 ounces rottenstone and $\frac{1}{2}$ ounce gum arabic pounded finely. Add 1 ounce sweet oil and sufficient water to form a paste. Apply and rub dry with flannel or wash leather.

3595. Cleaning and Polishing Brass.

Oleic acid seems to have a peculiar solvent action upon oxides, etc., and yet leaves the metallic surface intact, and when combined with finely powdered Venetian red and cleaning fluids, leaves nothing to be desired. The following is recommended:

Venetian red, finely powdered 3 troy ounces.
 Oil of turpentine..... 12 fl. ounces.
 Oleic acid 1 fl. ounce.
 Ammonia water $\frac{1}{2}$ fl. ounce.
 Alcohol 1 fl. ounce.
 Oil of sassafras 10 minims.

Mix; shake on using. Apply with a rag, and clean off when dry with whiting or precipitated chalk.

3596. Tarnished Gold.

In 16 ounces of water mix 2 ounces of bicarbonate of soda, 1 ounce of chlorinated lime, 1 ounce of common salt. Apply with a soft brush, using the solution either cold or slightly warm.

3597. For Cleaning Silver.

Rub the articles with salt, using a small sponge, piece of flannel, or chamols. Then polish with a little prepared chalk made into a thick paste with water to which a few drops of ammonia or alcohol has been added, this paste to be brushed or rubbed over the article.

3598. Cleaning Silver.

Prepared chalk 8 ounces.
 Spirit of turpentine..... 2 ounces.
 Alcohol 8 drams.
 Spirit of camphor..... 4 drams.
 Strong ammonia 2 drams.

Apply with a soft sponge and allow to dry before brushing off.

3599. Cleaning Silver.

Alum, powdered 3 drams.
 Common salt 8 ounces.
 Soft soap 4 ounces.
 Water 40 ounces.

Dissolve the salt and the alum in the water, then the soft soap and remove the scum.

3600. Oil Cloths, to Furbish.

Dissolve 2½ pounds paraffin in 1 gallon oil of turpentine by the aid of a gentle heat, and apply with a sponge or piece of flannel, while warm. Let it remain on the oil cloth 24 hours; then polish with flannel. This solution not only renovates but preserves the cloth.

3601. Matting and Oil Cloth, to Brighten.

Wash it twice during the summer with salt and water, say about a pint of salt, dissolved in half a pailful of warm, soft water, drying the matting quickly with a soft cloth. The salt will prevent it from turning yellow. Another plan is, after the oilcloth is scrubbed and dried, to rub it all over with a cloth dipped in milk. This will bring the colors out very bright.

3602. To Keep Linoleum Bright.

Wash with equal quantities of milk and water. Once in several months a little linseed oil or a weak solution of beeswax in spirits of turpentine may be used.

PAINT STAINS.

3603. Stains on Varnished Paints.

When the varnish is hard enough polish with water and tripoli, very finely ground, or with a great deal of water and rottenstone. Then rub with a very fine rag, dipped in sweet oil. Complete by drying with clean rag.

3604. Paint Stains on Clothes.

If the paint is fresh use turpentine or alcohol. Chloroform will remove dry white paint, which has resisted the action of ether, benzole and bisulphide of carbon.

3605. Paint Stains.

Absolute alcohol 3 ounces.
 Strong liquid ammonia.... 1½ ounces.
 Benzole 1 dram.
 Apply with flannel or sponge.

3606. Paint Spots on Cloth.

For taking out spots caused by oil colors or varnish, which often resist the employment of strong alkalis: An emulsion made by shaking together 2 parts of spirit of ammonia and 1 part of oil of turpentine. Apply to the stain and in a few minutes both can be wiped off together.

3607. To Remove the Smell of Paint.

First render the room as nearly as possible air-tight by closing the windows, doors and other openings. Place a vessel of light charcoal in the room, and throw on it two or three handfuls of juniper berries. After twenty-four hours the smell will have entirely disappeared. Another method is to plunge a handful of new hay into a pail of water and let it stand in the newly-painted room.

CLEANING, MISCELLANEOUS.

3608. Straw Hats, to Clean and Bleach.

A sponge is moistened with a solution consisting of 10 parts sodium thiosulphate, 5 parts glycerine, 10 parts alcohol and 75 parts water. The hat is then well sponged with this solution, then put into a dark, cool place for a day and then is once more thoroughly gone over with a sponge soaked with a solution containing 10 parts alcohol, 2 parts citric acid and 90 parts water. After again allowing to remain for some time in a cool place, the hat is ironed.

3609. Blackboards, to Remove Grease From.

Make a strong lye of pearlash and soft water, and add as much unslaked lime as it will take up. Stir and let it settle, then bottle and stopper close. Dilute with water when used and scour the part with it. The liquor must not be allowed to remain long, as it will draw the color from the board.

3610. To Clean Lamp Burners.

Take a piece of sal soda the size of a walnut, put into a quart of soft water, put your lamp burner in it (an old tomato can is good enough), set it on the stove; after boiling for five minutes remove the burner, and when put back on the lamp will be as good as new. All the carbon on the old burners should be removed once every month.

3611. To Clean Barrels.

Put a few pounds of unslaked lime in the barrel, add water, and cover. In a short time add more water, and roll the barrel. Rinse with clean water.

3612. To Clean Mouldy and Unclean Barrels.

First rinse them with water containing soda, then filling them with water slightly acidulated with hydrochloric acid, allowing them to stand two days, emptying them, and finally rinsing with clean water.

3613. To Remove Taste of New Wooden Vessels.

First scald with boiling water, and then wash with soda lye, to which a little lime has been added. Finally, rinse again with boiling water.

3614. To Clean Furs.

For dark furs: Warm a quantity of new bran in a pan, taking care that it does not burn, to prevent which it must be briskly stirred. When well warmed rub it thoroughly into the fur with the hand. Repeat this two or three times, then shake the fur, and give it another sharp brushing until free from dust.

For white furs: Lay them on a table and rub well with bran made moist with warm water, rub until quite dry, and afterwards with dry bran. The wet bran should be put on with flannel, then dry with book muslin. Light furs in addition to the above, should be well rubbed with magnesia or a piece of book muslin, after the bran process, against the way of the fur.

3615. Mildew, to Remove.

Mildew is the hardest of all stains to remove, and cannot be taken out of linen unless the effort is made soon after it appears. A very fresh, light stain may be treated successfully by covering it with table salt wet with lemon juice, and placing it on the grass in the sun. But the best remedy is the following: Mix soft soap with powdered starch, half as much table salt, and the juice of a lemon. Spread this mixture thickly on both sides of the mildewed linen, and then lay the fabric on the grass in the sun. Repeat the operation two or three times a day, leaving the cloth out over night as is done in bleaching. If this will not remove the stain nothing will do it.

SOAPS.

3616. Arsenical Soap (for Taxidermy).

White arsenic..... 4 ounces.
Slaked lime..... 4 ounces.
Carbonate of soda.....12 ounces.
Powdered camphor..... 6 drams.
Soft soap..... 4 ounces.

Mix thoroughly, adding water to bring the mixture to the consistence of soft soap.

3617. Borax Soap Powder.

Curd (hard) soap, in powder.. 5 parts.
Soda ash..... 3 parts.
Silicate soda..... 2 parts.
Borax 1 part.

Each ingredient is thoroughly dried, and all mixed together by sieving.

3618. Carbolle Soap.

Cocanut oil soap..... 75 ounces.
Alcohol 10 ounces.
Carbolic acid..... 6 ounces.
Caustic potash..... 2 ounces.
Oil of lemon..... 1 ounce.

Melt the soap and add to it the three last ingredients, dissolved in the alcohol. Mix well and pour into molds.

3619. Curd Soap.

Boil 700 kilograms of tallow with soda lye of 15 degrees to a clear jelly, and introducing 450 kilograms of palm-nut and 100 kilograms of cocoanut oil, with the requisite quantity of caustic lye of 23 degrees. The mixture is then boiled until a clear jelly, free from froth, is obtained. After the lapse of 2 hours any scum upon the surface is removed, and the product salted, or precipitated respectively with salt solution of 20 degrees, or caustic soda-ley of 40 degrees.

3620. Eau de Cologne Soap.

White castile soap..... 2,000 parts.
Oil of lemon..... 8 parts.
Oil of neroli..... 4 parts.
Oil of sweet orange..... 6 parts.
Oil of rosemary..... 1 part.
Oil of thyme..... 1 part.
Oil of petit grain..... 2 parts.
Essence of civet (13½ grains civet to 1 ounce of alcohol)..... 4 parts.

3621. Erasive Soap.

White soap..... 12 ounces.
Borax 1 ounce.
Salts of tartar..... 1 dram.
Oil sassafras..... 1 dram.
Water 8 ounces.

Cut the soap in shavings and dissolve in the water by the heat of a water-bath, add the borax and salts of tartar and boil till reduced to 1 pound; then, while cooling, add the oil of sassafras, and make into cakes of about 2 ounces.

3622. Erasive Soap.

Fuller's earth..... 15 parts.
French chalk..... ½ part.
Yellow soap..... 10 parts.
Pearl ash..... 8 parts.

Mix thoroughly, and make into paste with spirits of turpentine. Color if desired. Form into cakes.

3623. Erasive Soap.

Take fuller's earth, free from all gritty matter by elutriation with water; mix with $\frac{1}{2}$ pound of the earth so prepared $\frac{1}{2}$ pound of soda, as much soap, and 8 yolks of eggs, well beaten up with $\frac{1}{2}$ pound of purified oxgall. The whole must be carefully triturated upon a slab, the soda with the soap, in the same manner as colors are ground, mixing in gradually the eggs and the oxgall, previously beaten together. Incorporate next the soft earth by slow degrees till a uniform thick paste be formed, which should be made into cakes of a convenient size and laid out to dry. A little of this detergent is scraped off with a knife and made into a paste with water and applied to the clothing.

3624. Essence of Soap.

Under this title various preparations are made; but they are all solutions of soap in warm alcohol, with, generally, the addition of a small quantity of potash. Soaps made from vegetable oils are preferred, because they remain clear and liquid when cold, whereas those prepared from animal fats become solid in cooling. The following is a formula for preparing this soap:

White Marseilles soap..... $6\frac{1}{2}$ ounces.

Alcohol, at 85 degrees..... 1 quart.

Potash 6 drams.

Cut the soap into fine shavings, and put them into a bottle holding about $\frac{1}{2}$ gallon; add the alcohol and potash, and heat gently, without boiling, over a water-bath; stir with a glass rod. When the solution is complete, take it out of the water-bath and add the essences. A very sweet perfume may be given to this preparation by adding to it:

Oil of geranium..... $1\frac{1}{2}$ drams.

Oil of verbenia..... $2\frac{1}{2}$ drams.

To color yellow, add $2\frac{1}{2}$ drams saffron.

This essence continues limpid at the ordinary temperature. To use it, pour a little into $\frac{1}{2}$ tumbler of water, and stir quickly.

3625. Floating Soap.

Melt 14 pounds good, hard oil soap in 3 pints water by aid of heat, and assiduously heat together until the oil has at least doubled its volume. Color with 1 ounce vermilion, perfume, pour into frames not more than 6 inches deep.

3626. Floating Soaps.

Cocoanut oil..... 88.0 pounds.

Soda lye, 38 degrees B.... 46.2 pounds.

Potash lye, 25 degrees B. 2.2 pounds.

Melt the cocoanut oil in the usual manner, filter into capacious jacketed kettle or

one placed in a water-bath, and heat to about 122 degrees F. Then add the lye, stir well for about 10 minutes, and then cover up the kettle. Allow to saponify and then thoroughly stir again. The soap will now have the appearance of fine wooly grains.

3627. Glycerine Soap.

Twenty-six ounces of cocoanut oil, 30 of suet, and $37\frac{1}{2}$ of castor oil are heated together and allowed to reach finally a temperature of 156 degrees F.; to this mixture is then added 56 ounces of a 30 per cent caustic soda solution at a temperature of 66 degrees F. When the mass has become quite stiff, it is heated in a water-bath at a temperature of 180 degrees to 190 degrees F. until completely saponified and a clear, transparent product results; 25 ounces of sugar and 3 of glycerine dissolved in 26 ounces of water, strained and warmed to 190 degrees F., is gradually stirred into the mixture; 10 ounces of freshly powdered sodium carbonate is then stirred into the mixture until it is thoroughly dissolved, when a sample of the resultant compound spread upon glass should become hard. The rest of the mixture is allowed to remain in the water-bath for about 2 hours, when a sample cupful should remain firm, clear and transparent. This last can be insured, if necessary, by adding 1 to 2 ounces of sodium carbonate and warming the mixture to 145 degrees F. when cooled, to 135 degrees F. Several precautions are necessary in order to avoid the flocculent or turbid appearance of the product, namely, to use purified fats of the best quality, pure glycerine, and water free from lime.

3628. Fluid Glycerine Soap.

Five hundred grams olein, 100 grams alcohol, and 280 grams potash lye ($33\frac{1}{3}$ per cent) are placed in a flask and warmed over a steam-bath, shaking frequently; a solution of 50 grams potassium carbonate in 100 grams of water is then added, and heating continued until a portion removed is entirely soluble in water. The soap is next dissolved in 1,570 grams glycerine, set aside a few days, filtered, and the filtrate perfumed as desired.

3629. Liquid Glycerine Soap.

Oleic acid 187 pounds.

Cocoanut oil, best..... 33 pounds.

Potash lye, 35 B..... 114 pounds.

Glycerine 10 pounds.

The ingredients are saponified at a gentle heat, and sufficient 95 per cent alcohol added to make the soap clear.

3630. Transparent Glycerine Soap.

One hundred pounds dry bar soap to be heated and melted; then pour in 25 pounds or more of melted sal soda. Agitate together at a low heat. Then add 100 to 125 pounds of glycerine; agitate, keeping up a moderate heat. Let settle; draw off into molds or soap frames. When cold cut into bars and cakes.

3631. Transparent Glycerine Soap.

Best tallow	10 kilograms.
Best olive oil.....	2 kilograms.
Best cocoanut oil.....	4 kilograms.
Solution caustic soda (38 degrees B.).....	6½ kilograms.
Solution caustic pot- ash (38 degrees B.)...	6½ kilograms.
Water, distilled	1 kilogram.
Glycerine (C. P.) 28 de- grees B.....	8 kilograms.
Alcohol	6¾ kilograms.
Water	1¼ kilograms.

Perfume with

Oil bergamot	300 grams.
Oil geranium	50 grams.
Oil sandalwood	10 grams.
Oil Ceylon cinnamon...	20 grams.
Oil cloves	20 grams.
Oil petit grain (French)	50 grams.
Oil lavender	50 grams.
Alcohol, 94 per cent....	500 grams.

Melt the fats and strain. Heat to 75 degrees C., add the glycerine and the aqueous solution of the alkalies in a thin stream. Heat and stir until saponification takes place. Cool the mixture to 80 degrees C., then add the alcohol previously mixed with the water, this will re-dissolve the mass. Finally add the perfume, pour into molds and let cool.

3632. Green Soap.

Make this soap (in a glass or porcelain vessel) by dissolving 8 parts caustic potassa in 12 parts distilled water, then adding 24 parts olive oil, and stirring the mixture occasionally, until saponification is complete (twenty-four hours or more). The whole is then made up to 56 parts with distilled water.

3633. Honey Soap.

Soap recent.....	100.0
Purified honey	5.0
Roasted sugar	5.0
Odiferous mixture	2.0

3634. Iodine Soap.

In order to prepare a soap containing iodine it has been suggested to first iodize the fat or fatty matter by heating it with iodine and then saponifying in the usual way.

3635. Lanolin Soap.

Melt together

Ceylon cocoanut oil.....	60 parts.
Yellow lanolin	6 parts.

Saponify with

Alkali (38 degrees B.).....	33 parts.
After cooling, incorporate	
Oil cloves	70 parts.
Oil thyme	75 parts.
Oil lavender	75 parts.
Oil cinnamon	30 parts.
Oil bergamot	25 parts.

3636. Liquid Soap.

Mix one part caustic potash dissolved in an equal weight of water and four parts olive oil and one-fourth part of alcohol. Shake all together thoroughly for ten minutes. Stir the mixture repeatedly during the next hour, then mix with an equal quantity of water, and after letting stand for several days, filter. If it is desired to increase the disinfectant properties of this soap, incorporate some carbolic acid.

3637. Neutral Liquid Soap.

This is meant to be an absolutely neutral potash soap, but as complete saponification is brought about only by excess of alkali, which in the case of potash cannot subsequently be salted out or removed in any other manner, a special procedure is necessary. A soda soap is first made from pure olive oil and decomposed by dilute sulphuric acid. The fatty acids thus obtained are washed with distilled water until the latter runs off entirely neutral. These acids are then saponified with caustic potash so that a complete neutral soap results, and in order to prevent its thickening pure glycerine is added. Such soap is transparent, soluble in water and alcohol and resembles honey. It is perfectly neutral, specific gravity 1.05. This may be perfumed for the toilet.

3638. Neutral Soft Soap.

Evaporate the liquid soap until of the consistency of salve.

3639. Alkaline Liquid Soap.

Add 4 per cent of carbonate of potash to the neutral liquid soap. It is an excellent detergent for the skin, instruments and other objects, is useful in the bath to remove any greasy matter in the scalp, and its action is similar to soap spirits.

3640. Alkaline Soft Soap.

Add 4 per cent of carbonate of potash to the neutral soft soap.

3641. Superfatted Soft Soap.

A mixture of 90 parts neutral soft soap and 10 parts lanolin is used as a base for superfatted medicated soft soap.

3642. Superfatted Liquid Soap.

Unna prepares these by adding 3 or 4 per cent of olive oil to the neutral soap. While Buzzi acknowledges the mild effect of these soaps he prefers the use of lanolin for the purpose of superfatting. He makes an emulsion of 3 or 4 per cent of lanolin with the neutral liquid soap.

3643. Medicinal Soaps in Powder.

A neutral soap is made by boiling soda solution and beef suet together, and is used in the form of a fine, anhydrous, hygroscopic powder, forming the basis for all the soaps and being called neutral soap powder base. A base containing free or excessive fat is obtained by the addition of 2 per cent oleic acid and 3 per cent lanolin, while an alkaline soap powder base results from the addition of 2.5 per cent each of potassium and sodium carbonates. With either of these soap bases may be incorporated the following agents: 20 per cent pumice stone; 10 per cent sulphur, balsam of Peru, chrysarobin; 5 per cent salicylic acid, B-naphthol, camphor, borax, pyrogallol, menthol, salol, tannin, thiol, naphthalin; 3 per cent benzoin, iodoform, iodol; 0.2 per cent thymol, iodine, aristol, eucrophen, quinine sulphate; 2 per cent cantharidin. More than one medicinal ingredient may be used in proper combination.

3644. Ox Gall Soap.

Ox gall.....	10 ounces.
Stearin soap.....	9 ounces.
Borax, powdered.....	1 ounce.
Alcohol	1½ ounces.

Mix the first three ingredients at a slightly elevated temperature; then add the alcohol, transfer the whole to a flat-bottomed vessel, and when cool cut the soap into convenient pieces. The stearin soap is prepared as follows:

Stearic acid.....	2 troy ounces.
Sodium carbonate, crystallized..	560 grains.
Water	8 ounces.
Alcohol	2 fl. drams.
Sodium chloride.....	4 fl. drams.

Dissolve 540 grains of the crystallized carbonate of soda in 6 fluid ounces of water; transfer the solution to a steam-bath, and gradually add the stearic acid with constant agitation; then add the alcohol; cover the vessel and allow it to remain on the steam bath for six hours to separate the soap. Add the sodium chloride and the remainder of the sodium carbonate dissolved in the remainder of the water; transfer the whole to a strainer, and when cold press out the remainder of the moisture.

3645. Ox Gall Soap.

Mix together 1½ kilograms ox gall with 25 kilograms melted cocoanut oil. Saponify this mixture by the cold process with 12½ kilograms caustic soda lye of 38 degrees B. The soap may be dyed by the addition of 850 grams of ultramarine, and, if desired, perfumed with a mixture of 75 grams of lavender oil and 75 grams of caraway seed oil. Ox gall soap is used for scouring woolen goods.

3646. Ox Gall Soap.

Purified ox gall.....	1 part.
White curd soap.....	2 parts.

The soap is cut into shavings and melted in the ox gall at a moderate heat, evaporating until of proper consistency. The ox gall is prepared by boiling it with 10 to 12 parts of wood spirit and straining.

3647. Soft Ox Gall Soap.

Ox gall.....	10 ounces.
Potassium soap.....	5 ounces.
Sodium soap.....	4 ounces.
Borax	1 ounce.
Ammonia water.....	1 ounce.

Mix the ingredients at a slightly elevated temperature.

3648. Polishing Soap.

Cocoanut soap.....	5 pounds.
Chalk	6 ounces.
Alum	3 ounces.
Cream of tartar.....	3 ounces.
Carbonate of lead.....	3 ounces.

Cut the soap in shavings and put into an iron pot with a small quantity of water.

The powders are mixed with a small quantity of water until chemical action is over. During this time heat the soap and water, and when in a homogeneous mass add the other ingredients, incorporate thoroughly and pour into suitable molds to form bars, which can afterwards be cut into cakes.

Applied as a soap to metal surfaces and afterward rubbed with a chamois, it will produce a handsome polish on the metal.

3649. London Soap Powder.

Yellow soap.....	6 parts.
Soda crystals.....	3 parts.
Pearl ash.....	1½ parts.
Sulphate of soda.....	1½ parts.
Palm oil.....	1 part.

These ingredients are combined as well as possible without any water, and they are spread out to dry, and then ground into coarse powder. From the above specimen recipe one may infer that soap powders may be multiplied and varied ad infinitum. They are adapted to hard waters, as their excess of carbonated alkali neutralizes the lime in the water.

3650. Pearl Soap Powder.

Curd soap (powdered)..... 4 parts.
 Sal soda (crude sodium carbonate)..... 3 parts.
 Sodium silicate..... 2 parts.
 Dried as much as possible, and intimately mixed.

3651. Soap Powder Perfumed.

The preceding powder, when melted, is perfumed to any odor desired; for instance:

Soap 6 pounds.
 Essence of bergamot..... 4 ounces.
 Essence of lemon..... 1 ounce.
 Essence of Portugal..... ½ ounce.
 Essence of anise or fennel. ½ ounce.

3652. Pumice Soap.

Domestic soap, dried and rasped.. 750
 Crystallized carbonate soda..... 20
 Hot water..... 120
 Heat upon the water-bath until soft; thoroughly mix. Then add:
 Pulverized pumice stone..... 200
 (or 250)
 Pulverized talc..... 50
 Perfume, q. s.

3653. Putz Soap.

Soap 16 parts.
 Precipitated chalk..... 2 parts.
 Jewelers' rouge..... 1 part.
 Cream tartar..... 1 part.
 Magnesium carbonate..... 1 part.
 Water.

Shave the soap (white castile soap is best) fine, heat with enough water to make a soft paste, and work in the other ingredients, previously well mixed.

3654. Sand Soap.

Curd soap, 7 pounds; marine soap, 7 pounds; sifted silver sand, 28 pounds; otto of thyme, of cassia, of caraway, of French lavender, each 2 ounces.

3655. Savine Soap.

Powdered domestic soap..... 150
 Powdered borax..... 5
 Oil savine..... 10
 Extract savine..... 10
 Distilled water, q. s.

To use as a wash for scabies, herpes, etc.

3656. Shaving Soaps and Powders.

A shaving soap is made by melting together 400 parts of beef tallow, 200 parts of cacao butter, let the mixture cool to about 128 degrees F., and 340 parts of soda lye of 30 degrees, and 60 parts of potash lye of 30 degrees are added. The temperature is then slightly raised, the mixture stirred for 30 minutes, and perfumed while still warm with a mixture of 2 parts of oil of

caraway, 2½ oil of bergamot, 1½ parts of oil of lavender, 1 part oil of thyme, and ½ part oil of mirbane. The warm mass is poured into a square or oblong mold, cooled, and after hardening cut into any desired pieces, which should be allowed to dry in the air a little while and then wrapped in tin foil. A good antiseptic shaving soap is made by adding to the foregoing, while semi-fluid, 30 parts of salol in powder, and raising the temperature until the salol melts. A shaving soap is made by powdering 1,000 parts of any good tallow soap, and to each 2 pounds of the powder adding a mixture of 1 grain of coumarin, 5 drops oil of bergamot, 2 drops oil of wintergreen, and 3 drops of balsamic oil mixture (oleo balsamic mixture of National Formulary).

3657. Shaving Soap.

Melt together at 50 degrees C., 12½ ounces of beef suet and 6 ounces of cocoanut oil. To this add 10½ ounces of solution of soda (30 degrees Baume) and 1½ ounces solution of potash. Maintain at this temperature for half an hour, stirring thoroughly until it becomes a uniform thin paste. Then add and thoroughly mix the following perfume:

Oil of caraway..... 30 minims.
 Oil of bergamot..... 40 minims.
 Oil of lavender..... 25 minims.
 Oil of thyme..... 15 minims.
 Essence of myrobalans.... 5 minims.

To make the paste antiseptic, 1 ounce of salol may be added while the mass is still warm.

3658. Shaving Soap.

White castile soap..... 8 ounces.
 Spermaceti 2 ounces.
 Olive oil..... 2 ounces.

Melt upon a water-bath, then stir until nearly cold, and add perfume to suit. This may be, according to the cost required, oil mirbane, oil bergamot, oil geranium, oil rose, or a mixture of these.

3659. Shaving Soap.

Melt together 8 pounds best tallow, 6 pounds lard, 2 pounds castor oil, and saponify with 2 pounds of soda lye and 2 pounds of potash lye, each of 37 degrees strength. Perfume the finished soap to suit.

3660. Silver Soap.

Cocoanut oil..... 80 parts.
 Soda, or potash lye, 38 degrees B..... 40 parts.
 English red..... 10 parts.
 Water 10 parts.
 Sal ammoniac 1 part.

Mix the English red with the water and sal ammoniac, and stir the mixture well in with the soap mass while the latter is still hot.

3661. Silver Soap.

Cocanut oil..... 10 ounces.
Soda lye, 20 degrees..... 20 ounces.
(by weight.)

Boil these until saponification is complete, or take:

White soap..... 5 ounces.
Water 5 ounces.

Making a solution, with which intimately mix:

Prepared chalk..... 15 ounces.

If a red soap is desired, use the following, instead of 15 ounces of prepared chalk:

Prepared chalk..... 8 ounces.
Red tripoli..... 2 ounces.
White tripoli..... 3 ounces.
Polishing rouge..... 3 ounces.

3662. Silver Soap.

Hard soap..... 8 ounces.
Turpentine 1½ ounces.
Water 4 ounces.

Boil until perfect solution, and add

Water of ammonia..... 3 ounces.

3663. Soft Soap.

Olive oil..... 16 ounces.
Caustic potash..... 6 ounces.

Dissolve 5 ounces of the caustic potash in 2 pints of water. Add 8 ounces of this solution to the oil in a suitable vessel, place over a moderate fire, and stir until the mixture has become sufficiently thick. Gradually add the remaining portion of the caustic potash solution; stir occasionally until the mixture assumes a yellowish transparent, gelatinous form. Dissolve the remaining ounce of caustic potash in 2 pints of water, add to the mass and evaporate to the proper consistency.

3664. Soft Soap.

Heat solution of potassa (sp. gr. 1.144) 135 parts; add gradually linseed oil, 100; continue the heat for 30 minutes, then add alcohol, 25 parts, and as soon as the mixture has become uniform add gradually water, 200 parts, and heat until the mass becomes translucent and will be soluble in hot water without separating any oil; evaporate to 150 parts. According to the British Pharmacopoeia, soft soap is directed to be made from olive oil, while the U. S. Pharmacopoeia either allows either olive or other fixed oils. As made upon the large scale, the saponification is commenced with a weak solution of caustic, because soap being insoluble in a strong solution of caustic, the particles of fat would by the use of a strong lye, become incased in an insoluble layer of soap, which would prevent further action from taking place. The oil or fat, and the lye are boiled together

in a kettle until the pasty product becomes of sufficient consistency to draw threads out of the substance. It then undergoes the process of clear boiling, for which a stronger lye is used, the mixture being stirred continuously during the operation. When the paste does not sink any more—first it ascends—boils quietly, and shows the formation of scales, it may be considered finished.

3665. Domestic Soft Soap.

Potash 7½ pounds.
Grease 10 pounds.
Water 37½ gallons.

Dissolve the potash in part of the water, add ⅓ of the grease, and heat. Mix in the remainder of the grease, put in a barrel and add the remainder of the water, a little at a time, for several days. Stir often. Ready for use in about 2 weeks.

3666. Soft Soap, to Make Hard.

Put into a kettle four pailfuls of soft soap, and stir in it, by degrees, about 1 quart of common salt. Boil until all the water is separated from the curd, remove the kettle from the fire and draw off the water with a siphon (a yard or so of India rubber hose will answer). Then pour the soap into a wooden form in which muslin has been placed. For this purpose a wooden box, sufficiently large and tight, may be employed. When the soap is firm turn it out to dry, cut into bars with a brass wire and let it harden. A little powdered resin will assist the soap to harden and give it a yellow color. If the soft soap is very thin more salt must be used.

3667. Soap for Cleaning Elastic Stockings.

Powdered soap 2 pounds.
Distilled water 3 pints.

Dissolve the soap in the water, and when solution is complete allow to stand for two days and add:

Aqua ammonia 7 ounces.
Cologne spirit 33 ounces.

Dissolve ½ an ounce of the soap in a quart of cold water, in which let the stockings steep for 24 hours; then remove and wash well in cold water by shaking.

3668. Tar Soap.

Medicinal soap (castile soap) 24 parts.
Carbonate of sodium, dried
and powdered 2 parts.
Borate of sodium, powdered. 1 part.
Tar 8 parts.
Water, quantity sufficient.

Mix them together to a mass of pillular consistence and divide it into pieces of suitable size.

3669. Medicated Tar Soap.

Cocoonut oil 20 pounds.
 Tallow 10 pounds.
 Juniper tar 5 pounds.
 Soda lye (40 degrees B.)... 15 pounds.

3670. Cosmetic Tar Soap.

Tar soap, recently made..... 100.0
 Mix with
 Balsam Peru 2.0
 Oil bergamot 1.5
 Pulverized soap 10.0
 Water 2.5

3671. Tincture Green Soap.

Green soap, 100; strong alcohol, 50; and oil of lavender, 0.2 parts. This forms a convenient vehicle for the external application of chloroform, oil of turpentine, tar, benzol and ether, of which equal parts may be dissolved in the solution. At the temperature of the body the tincture will dissolve 40 per cent of carbon bisulphide.

3672. Tooth Soap.

Heat together on a water-bath 15 pounds of cocoonut oil and 5 pounds of olive oil, and when melted add 5 ounces of Berlin red, 5 ounces of calamus, 2½ ounces of cloves, 1 pound of sugar, 5 ounces precipitated chalk, 1 pound of orris root (all in fine powder). Heat the mixture to about 82 degrees F., then add 10 pounds of soda lye (38 degrees B.), at the same temperature. When saponification is complete, add the following perfume:

Oil of peppermint..... 4 ounces.
 Oil of star anise..... 1 ounce.
 Oil of cloves..... 2 ounces.
 Oil of cassia..... 3 drams.

Mix this with the soap while it is in a pasty state, and set aside for a day or two to allow it to set, then cut up the mass into suitable sized blocks.

3673. Vegetable Tooth Soap.

Talcum 1,000
 Pumice 50
 Orris root..... 200

Color with chlorophyll, and flavor with a mixture of:

Oil peppermint..... 10
 Oil sage..... 5
 Oil calamus..... 4
 Oil origanum..... 3
 Oil thyme..... 2
 Coumarin..... 6

Beat to a soft paste the following:

Soap powder..... 500
 Alcohol 200
 Glycerine 100

Gradually incorporate the powders, press into molds, brush the cakes with tincture of benzoin containing a little oil of peppermint, and cover with tin foil.

3374. Hard Tooth Soap.

Precipitated chalk..... 2 drams.
 Carmine 3 grains.
 Powdered soap..... 5 drams.
 Oil peppermint..... 10 drops.
 Alcohol 45 minims.

Triturate the carmine with a few drops of ammonia water and add the precipitated chalk. Dissolve the oil of peppermint in the alcohol; add the solution to the soap, contained in a mortar, and thoroughly incorporate; then add the precipitated chalk, and when the whole is homogeneous transfer to suitable molds and dry.

3675. Transparent Soaps.

The fats used in the preparation of transparent soap are cocoonut oil, tallow and castor oil. The proportion of the different fats may almost be taken at will, for a transparent soap will always be formed when the three fats are used. When good lathering soaps are to be made, the cocoonut oil will answer.

These soaps can be prepared with or without glycerine, from a charge consisting of:

Cocoonut oil..... 50 per cent.
 Tallow 30 per cent.
 Castor oil..... 20 per cent.
 Caustic soda lye of 36
 degrees B..... 60 per cent.

The cardinal point of success in all these soaps lies principally in effecting a thorough saponification, and when no alcohol is used, patience must be had until it is effected. When alcohol is employed, 1 liter of spirit is mixed with the lye and the mixture is quickly added to the fat, heated to about 75 degrees C. When Ceylon and copra cocoonut oil are used, it is possible to have a thoroughly combined soap as soon as the lye is added. But it is always advantageous to keep the boiler well covered for at least one hour, then gradually apply heat, and await the formation of a paste curd. Whether the lye and fat were thoroughly combined can only be determined after heating. A thoroughly combined soap adheres to the kettle, while one which is not completely combined separates the oil and only enters combination after long continued crutching.

To convert the stock soap into transparent soap, sugar solution is added. When glycerine and alcohol are used, ½ per cent distilled water is used for dissolving ½ per cent sugar. If, however, neither alcohol nor glycerine is employed, more water is taken for the sugar solution, and the soap is hardened with crystal soda or salt. Water must be added to the fluid soap until it forms a perfect liquid, and shows

no more separated curd. With a little experience the proper proportions can readily be determined by the appearance of the glass test, which should be clear and hard.

3676. Vanilla Soap.

Lard, with vanilla..... 30 pounds.
Cacao butter..... 10 pounds.
Palm oil..... 10 pounds.
Caustic lye, 36 degrees B.. 26 pounds.
Wax..... 2 pounds.
Starch..... 2 pounds.

Perfume with:

Tincture of vanilla..... 4 ounces.
Tincture of musk..... 2 ounces.
Tincture of ambergris..... 2 ounces.
Oil of rose..... $\frac{1}{2}$ ounce.

Lard with vanilla is prepared by adding the vanilla to the lard, 1 ounce to the pound, keeping it at a moderate heat for some days, then straining, etc.

3677. Vaseline Soap.

Animal fat..... 450 parts.
Cocoanut oil..... 50 parts.
Caustic soda, 36 degrees B. 250 parts.
Common salt..... 100 parts.
Vaseline 150 parts.
Distilled water..... 1,000 parts.

Dissolve in the water-bath, the fat and oil in the soda lye, add the salt and vaseline, and finally the water. Color and perfume to taste.

3678. Vaseline Tar Soap.

Saponify 40 pounds of cocoanut oil and 6 pounds of tar with 22 pounds of lye 40 degrees B. Dissolve 4 pounds of yellow vaseline and stir in the soap, with 1 pound lukewarm water.

3679. Yellow Soap.

Tallow $1\frac{1}{2}$ pounds.
Sal soda..... $1\frac{1}{2}$ pounds.
Resin 56 pounds.
Stone lime..... 28 pounds.
Palm oil..... 8 ounces.
Soft water..... 28 gallons.

Put the soda, lime and water into a kettle and boil, stirring well; then let it settle and pour off the lye. In another bottle melt the tallow, resin and palm oil, having it hot, the lye being also boiling hot. Mix, stirring well, and the work is done.

Tallow and other fats are commonly purified by melting them along with water, passing the mixed fluids through a sieve, and letting the whole cool slowly, when a cake of cleansed fat is obtained. Another plan is to keep the tallow melted for some time along with about 2 per cent of sulphuric acid largely diluted with water and under constant agitation. Allow the whole to cool slowly. Remelt the tallow with a large quantity of hot water, and wash it well.

INSECTICIDES, FLY PAPERS, VERMIN POISONS, ETC.

3680. Red Ants.

Powdered borax sprinkled around the infested places will drive them away, as also will powdered cloves. Grease a plate with lard, they will leave sugar to go to it, and then turn them into the fire; cracked nuts will answer the same purpose. Oil of turpentine run into the cracks with a sewing machine oil can.

3681. Ants.

A good preventive for the inroads of ants is a stripe of carbolated petrolatum about half an inch in width drawn about the places frequented.

3682. Ant Poison.

Cape aloes..... 1 pound.
Water..... 1 gallon.
Boil together, and add to the mixture:
Camphor, in small pieces... 6 ounces.
This can be used for other insects by diluting with water and sprinkling through a garden pump or watering can.

3683. To Exterminate Ants.

Sprinkle their haunts with quick lime containing a twentieth of its weight of powdered camphor.

3684. Bed Bug Poison.

Corrosive sublimate..... $\frac{1}{4}$ pound.
Muriate ammonia, powdered..... $\frac{1}{4}$ pound.
Water $\frac{1}{2}$ gallon.
Glycerine 4 ounces.
Wood alcohol..... $\frac{1}{2}$ gallon.

3685. Bed Bug Poison.

Camphor 2 ounces.
Spirits of turpentine..... 4 ounces.
Corrosive sublimate..... 1 ounce.
Alcohol..... 16 ounces.

3686. Bed Bug Poison.

Strong mercurial ointment. 1 ounce.
Soft soap..... 1 ounce.
Oil of turpentine..... 16 ounces.

3687. Bed Bug Poison.

Tobacco 100 grams.
Crude naphthalin..... 100 grams.
Oil melissa, enough.
Benzine 1 kilogram.
Extract the tobacco by macerating for 5 days in the benzine; strain and dissolve the other ingredients in the filtrate.

3688. Bed Bug Destroyer.

Tincture of tobacco.....200 parts.
 Boric acid 6 parts.
 Carbolic acid 6 parts.
 Salicylic acid 12 parts.
 Oil of Indian balm..... 1 part.

3689. Caterpillars.

Rue,
 Wormwood,
 Tobacco, of each equal parts.

Make a strong decoction in water and sprinkle it on the leaves and young branches every morning and evening during the time the fruit is ripening.

3690. Carpet Bugs.

Flour of sulphur is said to be a sure preventive against the ravages of carpet bugs or buffalo moths.

3691. Cockroach Powder.

A mixture of the following substances strewed around the places infested will drive away every one of the pests: 2 parts naphthalin, 200 parts powdered angelica root, 50 parts melilot, 5 parts oil of eucalyptus.

3692. Cockroach Powder.

Borax 10 ounces.
 Sugar 3 ounces.
 Cocoa powder ½ ounce.

Mix and sprinkle near where the insects are.

3693. Roach and Moth Exterminator.

Thymol 2 parts.
 Salicylic acid 2 parts.
 Alcohol 200 parts.

Dissolve and perfume the mixture with Oil of lemon..... 1 part.

This preparation makes no stain and kills the vermin immediately. The odor is not unpleasant and is quickly removed by airing the room.

3694. Kerosene Emulsion as an Insecticide.

	Per cent.
Kerosene	2 gallons. 67
Common soap or	
whale oil soap.....	½ pound. 33
Water	1 gallon. 33

Heat the solution of soap and add it boiling hot to the kerosene. Churn the mixture by means of a force pump and spray nozzle for 5 or 10 minutes. The emulsion, if perfect, forms a cream which thickens upon cooling and should adhere without oiliness to the surface of glass. For use against scale insects dilute one part of the emulsion with nine parts of water. For most other insects dilute one part of the emulsion with fifteen parts of

water. For soft insects like plant lice the dilution may be carried to from 20 to 25 parts of water.

This insecticide acts by contact and is applicable to all non-masticating insects (sucking insects, such as the true bugs and especially plant lice and scale insects) and also to many of the mandibulate insects when the use of arsenites is not advisable.

3695. Fleas.

Place common sticky fly paper on the floors of the room infested and in the center of each sheet a small piece of fresh meat. The fleas will jump towards the meat and adhere to the paper, and even a badly infested house can be rid of the pests within a day or so.

3696. Fleas on Dogs, Horses and Cattle.

Beef gall,
 Oil of camphor,
 Oil of pennyroyal,
 Extract of gentian,
 Spirits of wine, equal parts.

3697. For Furs.

Pure carbolic acid..... 6 fl. drams.
 Oil of cloves..... 3 fl. drams.
 Lemon peel 3 fl. drams.
 Nitro-benzole 3 fl. drams.

Dissolve in 1 quart of spirit of wine.

The articles are moderately sprinkled with the fluid. One sprinkling will suffice for the summer, provided they are stored in closed boxes or closets, but cloth in storerooms will require to be sprinkled twice.

3698. Fly and Mosquito Bane.

Expressed oil bay..... 10 parts.
 Oil eucalyptus 20 parts.
 Ether 20 parts.
 Alcohol 70 parts.

Dissolve the expressed oil bay in the ether, and the oil eucalyptus in the alcohol. Mix the two solutions, and filter rapidly in a covered funnel. This compound may be used for domestic animals as well as for man, or it may be placed about the house.

3699. Fly Lotion.

Quillaja bark, in coarse
 powder 1 ounce.
 Boiling water 2 pints.
 Infuse for an hour, strain and add:
 Corrosive sublimate ½ ounce.
 Hydrochloric acid ½ ounce.
 Turpentine 5 ounces.
 Spirit of tar..... 5 ounces.

Shake well together.

To prevent the fly striking, and for mag-

gots: Mix two tablespoonfuls with a wine-bottle of cold water.

To kill lice: Mix three tablespoonfuls with a wine bottle of cold water, and rub on with a brush.

For mange: Mix four tablespoonfuls with a wine bottle of cold water, and rub the mixture in well with a brush every day until cured.

3700. Fly and Mosquito Oil.

For keeping flies and mosquitoes away from horses, try a mixture containing 8 ounces lard oil, 8 ounces oil of tar, 4 ounces each of glycerine, oil of pennyroyal and spirit of camphor, and 2 ounces carbolic acid.

3701. Cobalt Fly Paper.

Quassia chips 150 parts.
Chloride of cobalt..... 10 parts.
Tartar emetic 2 parts.
Tincture of capsicum..... 80 parts.
Water 400 parts.

Boil the quassia until the liquid is reduced one-half, strain, add the other ingredients. Saturate common absorbent paper with the solution and dry. The paper is used in the ordinary way.

3702. Poison Fly Paper.

Make a solution of 2 parts arseniate of potassium or arseniate of sodium, 4 parts white sugar, 40 parts water. Saturate stout unsized paper in this solution, then dry. To use the paper moisten it with water and place in saucers. Great care should be taken with this paper, as it is poisonous.

3703. Poison Fly Paper.

Arsenious acid 6 av. ounces.
Boiling water 1 gallon.
Sodium carbonate 8 av. ounces.

Dissolve the arsenious acid, previously reduced to a powder, in the boiling water, with sodium carbonate and, while hot, immerse sheets of coarse unsized paper in the solution. After they are saturated, drain and hang on lines to dry. Mark each sheet "poison." Glucose or sugar may be added to make it more attractive to the flies. It must be remembered that the paper will poison any animal life, so it should be handled as any other poison.

The paper will keep any length of time, as arsenic will not spoil.

3704. Sticky Fly Paper.

The ordinary method is to paint heavy unsized manilla paper with common glue, using an ordinary flat paint brush, and allowing to dry. Then follow with one or two coats of the following mixture, made

by melting over a gentle fire, stirring constantly:

Castor oil, 4 ounces; resin, 12 ounces. Another mixture, which is spread warm upon unsized paper, is castor oil, 8 ounces; resin, 24 ounces; sugar, 4 ounces. This latter is probably the better one as being more attractive to the flies.

3705. Sticky Fly Paper.

Gum thus..... 4 ounces.
Linseed oil..... 1½ ounce.
Honey 1 ounce.

Melt and mix well, spread over sized paper when hot.

3706. Insect Bites.

Salicylic acid..... 1 part.
Flexible collodion..... 19 parts.

3707. Insect Bites.

Corrosive sublimate..... 1 part.
Flexible collodion..... 1,000 parts.

3708. Insect Bites.

Ammonium carbonate 90 parts.
Camphor 2 parts.
Boric acid..... 8 parts.

As a binding material, a dilute mucilage may be employed.

3709. Insect Powder.

Sulphate of iron..... 32 parts.
Licorice root..... 33 parts.
Quassia 8 parts.
Black pepper..... 32 parts.
Linseed meal..... 56 parts.
Fennel 8 parts.
Kummel 8 parts.

Powder the solid ingredients thoroughly, moisten the linseed meal with the kummel, and then thoroughly mix the whole.

3710. Insects in Drugs.

The cure for their foraging is the application of small quantities of chloroform or bisulphide of carbon, and on exposure of the drug to the atmosphere in a few moments the odor is lost.

3711. Insecticide for Plants.

Soft soap..... 4 parts.
Tobacco 6 parts.
Fusel oil..... 5 parts.
Methylic alcohol..... 20 parts.
Water, sufficient to make 1,000 parts.

Boil the tobacco with an equal weight of water for half an hour, replacing the water as it is dissipated on boiling. Then strain. Mix this liquid extract with the other ingredients, and add enough water to make 1,000 parts. Before use, the mixture is well shaken up, and then applied by means of a syringe throwing a fine spray to the affected plants.

3712. Insecticide for Agriculturists.

The following is one of the best preparations known for killing aphids, mealy bug, cotton blight and other insects. It is made as follows:

Sulphurated potash.....1 pound.
Soft soap..... 4 pounds.

Rub the sulphurated potash as fine as possible, and mix intimately with the soap. A large teaspoonful of this should be mixed with each gallon of soft water, and the plants should be well sprayed with the solution.

3713. Lice on House Plants.

Take some of the common fine-cut smoking tobacco, strong, and sprinkle it over the top of the earth about the plant, and keep the plant well watered. The strength of the tobacco now passes through the earth and about the roots, and is just as sure to kill all creeping things as it is used and is a great benefit to the plants.

3714. Powder Against Lice.

Stavesacre seed..... 2 parts.
Cevadilla seed..... 2 parts.
White hellebore..... 1 part.
well.

3715. Mosquitoes.

Make a paste with muclage of tragacanth of 500 parts charcoal in powder, 60 parts saltpeter, 40 parts carbolic acid, 250 parts insect powder. Divide into suitable sized cones and use as fumigating pastilles.

3716. Mosquitoes.

Oil of bay laurel emulsified with soap and with some creolin added is a good application for animals.

3717. Mosquitoes.

An insecticide of excellent utility is 1 part of solution of borosalicylate of sodium and 50 parts decoction of quassia.

3718. Mosquitoes.

One hundred parts each of benzoin and tolu balsam, 500 parts charcoal in powder, 150 parts insect powder, 50 parts saltpeter, made into a paste and employed as No. 3715.

3719. Mosquitoes.

Take of gum camphor a small piece and evaporate it by placing it in a tin vessel over a lamp or candle, taking care that it does not ignite. The smoke will soon fill the room and expel the mosquitoes.

3720. Mosquitoes.

Oil of pennyroyal, scattered about in small quantities.

3721. Mosquito Oil.

Carbolic acid..... 2 ounces.
Oil of pennyroyal..... 4 ounces.
Spirit camphor..... 4 ounces.
Oil of tar..... 8 ounces.
Glycerine..... 4 ounces.
Lard oil..... 8 ounces.
Used to keep flies off horses.

3722. Mosquitoes, Fumigating Pastilles.

Wood charcoal..... 1 pound.
Potassium nitrate..... 2 ounces.
Carbolic acid..... 1½ ounces.
Persian insect powder..... 8 ounces.
Muclage tragacanth, sufficient quantity.

To form pastilles.

3723. Anti-Mosquito Powder.

Eucalyptol..... 5 parts.
Talcum 10 parts.
Corn starch..... 85 parts.

Especially adapted for parties camping out. It may be rendered more effective by replacing 50 per cent or more of the starch by naphthalin.

3724. Moth Cake.

Cedar dust..... 1 ounce.
Camphor 1 ounce.
Cassia powder..... 1 ounce.
Orris powder..... 1 ounce.
Essential oil, a little.
Gum myrrh, powdered..... ¼ ounce.
Curd soap..... ¼ ounce.

Mix, adding sufficient alcohol to mass, and press into cakes.

3725. Anti-Insect Cubes, for Moths, Bugs, Fleas, etc.

Melt together on a water-bath 4 ounces paraffin, 2 drams crystallized carbolic acid, 1 dram naphthalin, ½ grain musk, 4 drams powdered camphor. Cast into squares and wrap in tin foil. Placed in a bed or wrapped in a night dress, they will protect the sleeper from all species of the red rover. In a sick room they are most useful, purifying and scenting it. The musk may be replaced by oil of lavender if desired.

3726. Moth Essence With Patchouly.

Oil patchouly 2.0
Oil cloves..... 10.0
Oil bergamot..... 10.0
Carbolic acid, pure..... 20.0
Alcohol 300.0

3727. Moth Paper.

Carbolic acid..... 1 part.
Ceresin 1 part.
Naphthalin 2 parts.

Melt, and immerse in the melted liquid pieces of bibulous paper. Dry on metallic plates.

3728. Moths, to Preserve Clothing and Furs From.

Gum camphor..... 1 ounce.
 Cayenne pepper..... 1 ounce.
 Alcohol 8 ounces.

Macerate several days, then filter. With this tincture the furs or clothing are sprinkled over and rolled up in sheets.

3729. Moth Pastilles.

Camphor 5 parts.
 Black pepper..... 10 parts.
 Absinthe 10 parts.
 Patchouly 2 parts.
 Essence of lavender..... 2 parts.
 Essence of cloves..... 1 part.
 Paraffin 100 parts.

Melt together and make into pastilles.

3730. Moth Powder.

Powder of pyrethrum..... 16 parts.
 Powder of camphor..... 16 parts.
 Powder of colocynth..... 16 parts.
 Oil of lavender..... 1 part.

3731. Moth Solution.

Carbolic acid..... 1 ounce.
 Gum camphor..... 1 ounce.
 Benzine, to make..... 1 pint.

Dissolve the gum and carbolic acid in the benzine. Apply by saturating a piece of blotting paper, or use it in form of spray by use of an atomizer.

3732. Mouse Poison.

Sulphate of strychnine..... 70 parts.
 Milk sugar..... 70 parts.
 Prussian blue..... 2 parts.
 Arsenic 140 parts.
 Wheat flour..... 600 parts.

Rub up the strychnine and milk sugar together, add the Prussian blue and arsenic, and finally add the flour, and mix thoroughly. When required for use, moisten and make a dough, divide into small pellets and dry.

3733. Nursery Insecticide.

Vinegar of cantharides.....
 or
 Vinegar of stavesacre..... 3 drams.
 Glycerine 1 ounce.
 Infusion of quassia (1 to 7)
 enough to make..... 1 pint.

3734. Rat Poison.

Make into a stiff mass with wheat meal, 2 parts of squills, bruised, and 3 parts of finely-chopped bacon. Bake in small cakes, and put down for the rats to eat.

3735. Miller's Rat Poison.

Oatmeal 1 pound.
 Nux vomica, fine powder.... 1 ounce.
 Oil of anise..... 5 drops.
 Tincture of asafoetida..... 5 drops.

3736. Rat Poison.

Ground malt..... 1 pound.
 Powdered cantharides..... 2 ounces.
 Musk 1 grain.
 Oil of rhodium..... 6 drops.
 Oil of caraway..... 6 drops.
 Brown sugar..... 2 ounces.

Mix.

3737. Mineral Rat Poison.

Barium carbonate..... 4 ounces.
 Sugar 6 ounces.
 Oatmeal 6 ounces.
 Oil of anise,
 Oil of caraway,
 Of each a few drops.

3738. Phosphorus Paste.

Introduce 1 dram of phosphorus into a Florence flask, and pour over it 1 ounce of alcohol. Immerse the flask in hot water until the phosphorus is melted, then put a well-fitting cork into the mouth of the flask, and shake briskly until cold. The phosphorus is now reduced to a finely-powdered state. After pouring off the alcohol, mix the phosphorus in a mortar with 1½ ounces of lard, 5 ounces of flour and 1½ ounces of brown sugar, previously mixed together, are now added, and the whole made into a paste with a little water. It is said there is no danger whatever of spontaneous ignition either during or after the preparation of this paste.

3739. Phosphorus Paste.

The following may be kept unchanged for a considerable length of time: Five grams of phosphorus are dissolved in 20 grams of boiling hot water, and afterwards mixed with 30 grams of castor oil, fresh butter or oleic acid; 30 to 40 grams of tritured arrowroot starch are then stirred into the mass, and so much boiling water added as will completely soak the starch, and form the whole into a homogeneous paste.

3740. Sulphur-Phosphorus Paste.

Phosphorus 22 parts.
 Sublimed sulphur..... 5 parts.
 Water, enough to cover.

Pour upon these as much bisulphide of carbon as will dissolve the sulphur and phosphorus, then add:

Powdered mustard..... 8 parts.
 Water 300 parts.
 Powdered sugar..... 240 parts.
 Wheat meal..... 360 parts.

3741. Phosphorus Rat Poison.

Phosphorus 1 ounce.
 Water (100 degrees F.)..... 16 ounces.
 Molasses 8 ounces.
 Lard 16 ounces.
 Oatmeal, q. s.

3742. Phosphorus Rat Poison.

Phosphorus 75 grains.
 Water, hot..... 6 drams.
 Butter, fresh..... 1 ounce.
 Corn starch, fine..... 1 ounce.

Reduce the phosphorus to fine globules by shaking vigorously with the water contained in a suitable bottle, taking care to have the hand protected with a glove, or the bottle wrapped in a cloth, for fear of accident. When nearly cool, add the molasses, and then the liquefied lard. Finally, incorporate with the oatmeal or flour to form a stiff paste.

3743. Rough on Rats.

This preparation consists principally of arsenic, colored with lamp black or similar substance. A good substitute, but one containing far less arsenic, is:

White arsenic..... 10 parts.
 Wheat flour..... 90 parts.
 Lard 90 parts.
 Lamp black..... ½ part.
 Oil anise..... 1-10 part.

Make into globules.

3744. To Preserve Stuffed Animals.

Lime, air-slaked, in fine powder..... 2 parts.
 Tobacco ashes, sifted..... 1 part.
 Alum 1 part.

Mix and rub thoroughly into the flesh side of the skins to be stuffed.

3745. To Preserve Stuffed Animals.

Sal-ammoniac..... 1 ounce.
 Burnt alum..... ½ ounce.
 Tobacco ashes..... 3½ ounces.
 Aloes 25 ounces.

Pulverize and mix. Use as above.

3746. Ticks on Cattle.

Try a mixture of benzine, 10 parts; water, 85 parts; soap, 5 parts. Keep the benzine away from the fire, as it is highly combustible. Or mix, by heat, common soap with water and crude carbolic acid and apply to the cattle.

3747. Vermin Killer.

Strychnine 1 dram.
 Arsenic 1 dram.
 Prussian blue..... 5 grains.
 Sugar ½ ounce.
 Wheat flour.... ½ ounce.

3748. Killing Worms in Flower Pots.

A strong mixture of ground mustard in water applied to the surface. This brings them to the surface, where they may be killed.

3749. Killing Worms in Flower Pots.

A solution of sulphate of lime has always been successful.

3750. Killing Worms in Flower Pots.

Corrosive sublimate..... 2 ounces.
 Muriate of ammonium..... 4 ounces.

Dissolve in a pint of boiling water and when cold add the solution to 2 gallons of cold water.

DISINFECTANTS, ANTISEPTICS, DEODORIZERS, ETC.

3751. Disinfectant.

Crude carbolic acid..... 2 parts.
 Slaked lime..... 3 parts.
 Turf mold..... 5 parts.

Mix. This is the so-called Dieterich disinfecting powder.

3752. Disinfectant.

Iron sulphate..... 3 parts.
 Slaked lime..... 3 parts.
 Turf mold..... 4 parts.

Mix. This is especially recommended for privy vaults.

3753. Disinfectant.

Iron sulphate..... 500 parts.
 Plaster of Paris..... 475 parts.
 Crude carbolic acid..... 25 parts.

Mix.

3754. Disinfectant.

Sulphate of iron..... 68 parts.
 Plaster of Paris..... 6 parts.
 Calcium sulphate..... 5 parts.
 Infusorial earth..... 5 parts.

Powder and mix.

3755. Disinfectant.

Slaked lime..... 100 parts.
 Coal tar..... 25 parts.
 Infusorial earth, sufficient to make a dry powder.

Mix.

3756. Disinfectant.

Quick lime..... 70 parts.
 Charcoal 10 parts.
 Crude carbolic acid..... 6 parts.
 Zinc chloride..... 10 parts.
 Hypochlorated zinc oxide... 5 parts.
 Infusorial earth..... 5 parts.

Powder and mix.

3757. Disinfectant.

Calcium sulphate..... 15 parts.
 Quick lime, in powder..... 10 parts.
 Magnesia 10 parts.
 Crude carbolic acid..... 15 parts.
 Infusorial earth..... 7 parts.

Mix.

3758. Disinfectant Mixtures.

Crude carbolic acid..... 50 parts.
 Iron sulphate..... 25 parts.
 Slaked lime..... 150 parts.
 Calcium sulphate..... 750 parts.
 English red, sufficient to color.
 Powder and mix.

3759. Disinfectant Mixture.

Oil of tar..... 50 parts.
 Chalk 70 parts.
 Dried bran..... 80 parts.

3760. Disinfectant Mixture for Apartments.

Camphor 20 parts.
 Calcium hypochlorite..... 50 parts.
 Alcohol 50 parts.
 Water 50 parts.
 Oil eucalyptus..... 1 part.
 Oil cloves..... 1 part.

Mix in a large vessel, kept cold. A few drops on a napkin are enough to disinfect a room.

3761. Antiseptic Solution, External Use.

Menthol 0.2 grams.
 Thymol 0.5 grams.
 Boric acid 0.2 grams.
 Sodium benzoate 1 gram.
 Sodium salicylate 1 gram.
 Oil gaultheria 6 drops.
 Oil eucalyptus 18 drops.
 Glycerine 15 grams.
 Water to make..... 188 grams.

3762. Compound Antiseptic.

Corrosive sublimate..... 5 parts.
 Salt 25 parts.
 Carbolic acid 200 parts.
 Chloride of zinc 500 parts.
 Sulphocarbonate of zinc.... 500 parts.
 Boric acid 300 parts.
 Salicylic acid 60 parts.
 Thymol 10 parts.
 Citric acid 10 parts.

3763. Volkmann's Antiseptic Liquid.

Thymol 1 part.
 Alcohol 10 parts.
 Glycerine 20 parts.
 Water 100 parts.

Dissolve the thymol in the alcohol, add the glycerine, and lastly the water.

Used as an antiseptic on wounds and dressings.

3764. Disinfecting Cakes.

The so-called "urinal cakes" are said to be a mixture of resin with sulphates of copper, iron, zinc and soda, and some alum.

3765. Carbolic Acid Paste.

Melt on a water bath 1 pint honey, strain into 4 ounces glycerine, and incorporate sufficient of this powder to make a paste; precipitated chalk, 1 pound; orris powder, 4 ounces; carmine, 1 dram; mix, and flavor with carbolic acid, $\frac{1}{2}$ dram, oil of wintergreen, 20 drops; oil of cinnamon, 5 drops; alcohol, 4 drams.

3766. Corrosive Sublimate Solution.

Corrosive sublimate..... 3 ounces av.
 Picric acid 6 grains.

Hot distilled water sufficient to make 4 pints (Imperial measure). Half an ounce of this solution made up to one pint with water produces a 1 to 1,000 solution, the strength usually employed.

3767. Cresylate of Lime.

Add 5 parts of crude cresylic acid to a milk of lime containing one part of lime in 4 parts of water. If this proportion of ingredients is maintained, the syrupy liquid produced is miscible with water in all proportions, but if an excess of either ingredient is present, a solid mass is produced, very difficultly soluble.

3768. Disinfection of the Hands.

1. Mechanical cleansing of the nails and thorough washing of the hands with soap and water.
2. Brushing for one minute.
3. Washing in alcohol.
4. Rinsing one minute in 3 per cent carbolic or 1 to 2 per cent sublimate solution.
5. Drying with clean towel, and wiping away scrapings of subungual space.

3769. Household Disinfectant.

Era.

Iron sulphate 8 ounces.
 Ammonium chloride 1 ounce.
 Corrosive sublimate 1 dram.
 Alcohol 4 ounces.
 Water, to make 32 ounces.

Put up the iron sulphate with 24 ounces of water. Dissolve the corrosive sublimate in the alcohol. Mix both solutions, add the ammonium chloride and enough water to make 32 ounces.

Mix with equal parts of water and use as a disinfectant.

3770. Phenol Sodique.

It is a thin, dark colored, almost black liquid, specific gravity 1.015, and an alkaline reaction. On agitating a great quantity of foam is produced. It contains 66 per cent of tarry matters, and about 1 per cent of phenols, which are not separated on diluting with water and nearly

1½ per cent of soda. A very similar preparation is yielded by the following:

Dissolve 120 grains of soda in 4 fluid ounces of water; warm, add 2 troy ounces of coal tar and thoroughly shake for a few minutes. Then add sufficient water to make one pint, and set the mixture aside in a warm place, shaking frequently during seven days. Decant the solution, filter through a moistened filter, washing the residue with sufficient water to make the product measure one pint.

3771. Disinfecting Sinks.

Washing soda, two tablespoonfuls to a gallon of boiling water, makes an excellent wash to pour hot into the sink at night after you have finished using it.

3772. Sulphur Cones.

Sublimed sulphur 10 ounces.
Plaster of paris 2 ounces.
Charcoal 1 ounce.
Nitro 1 dram.

Mix well and beat into a stiff dough with flour paste (using as little as possible of the latter). Mold into the required shape, and set in the sun to dry.

3773. Solution of Four Chlorides. Era.

Alum 10 ounces.
Sal soda 10 ounces.
Sal ammoniac 2 ounces.
Common salt 2 ounces.
Chloride zinc 1 ounce.
Muriatic acid, commercial q. s.
Water, quantity sufficient
to 1 gallon.

Dissolve the alum in ½ gallon of boiling water, then add the sal soda, which gives a precipitate of aluminum hydrate. Muriatic acid is then added in sufficient quantity to dissolve this precipitate, thereby forming aluminum chloride. The other salts are then dissolved in the remainder of the water and added to the first solution.

The advantages claimed for this preparation are cheapness, ease of preparation, odorless, non-poisonous, and its adaptability for general use. Its freedom from iron, in the disinfection of clothing, is an important point in so much that it will not injure the fabric in any way. It commends itself for the disinfection of rooms, by saturating a sheet with the diluted solution and hanging up in any convenient place. This diluted solution may be made by mixing one pint of the concentrated solution with 1 gallon of water.

3774. Liquid Deodorant for Water Closets.

Thymol 5 parts.
Phenol 10 parts.
Alcohol 100 parts.
Water 885 parts.

The solution is used as a spray or is evaporated by heating at a low temperature.

3775. Liquid Deodorant for Water Closets.

Thymol 1 part.
Eucalyptol 4 parts.
Borax 40 parts.
Dissolve in
Glycerine 80 parts.
Camphor water..... 160 parts.
Tar water..... 410 parts.

Most deodorants as a rule only correct bad odors by masking or covering them up, while a disinfectant destroys disease germs and the noxious properties of fermentation and putrefaction. As combining both a deodorant and a disinfectant see the following:

3776. Liquid Deodorant for Water Closets.

Ferric chloride..... 4 parts.
Zinc chloride..... 5 parts.
Aluminum chloride..... 5 parts.
Calcium chloride..... 4 parts.
Manganese chloride..... 3 parts.
Water, sufficient to make... 90 parts.

Dissolve and add to each gallon 10 grains thymol and ¼ ounce oil of rosemary previously dissolved in about 6 parts of alcohol, and filter.

3777. Liquid Deodorant for Water Closets.

Potassium chloride..... 5 parts.
Sodium chloride..... 5 parts.
Magnesium chloride..... 5 parts.
Zinc chloride..... 3 parts.
Aluminum chloride..... 3 parts.
Calcium chloride..... 6 parts.
Water, sufficient to make.. 100 parts.

Dissolve and saturate with methyl salicylate and oil of eucalyptus.

3778. Water Closet Deodorant.

Fill a quinine bottle with permanganate of potassium and cork it securely. Bore two holes in the cork with a large pin, and fasten it by the aid of wires, mouth downward, in the cistern, so that when this is full it will be completely submerged. See that the holes are large enough to permit the water in the cistern to become sufficiently charged with the deodorant. The above supply of permanganate is sufficient to last several months.

3779. Carbolic Disinfectant Tablet.

Intimately mix 20 parts of talc with 50 parts of plaster of Paris and 10 parts of carbolic acid; sufficient water is then added to form a mass, which is poured into small paper capsules prepared for the purpose. The mass soon becomes hard; each tablet is then wrapped in paper and tin foil, and the whole preserved in a tin box. For use, the wrapper is removed and the tablet placed in a suitable place in the room, in which a pretty strong odor of phenol will be perceptible for 10 or 15 days, according to the temperature.

3780. Atomizing Liquid for Sick Rooms.

Best oil of turpentine..... 20 parts.
 Oil of lavender..... 2 parts.
 Oil eucalyptus..... 2 parts.
 Oil of lemon..... 1 part.
 Oil of bergamot..... 1 part.
 Alcohol 100 parts.

Mix. Expose to the rays of the sun for 1 week, shaking it once in a while.

3781. Fumigating a Room.

Take an iron shovel heated very hot and pour on it, drop by drop, some vinegar. The steam arising is a disinfectant. Open doors and windows that it may escape.

3782. Preservative for Botanical Specimens.

Glycerine, alcohol, distilled water, of each, 1 ounce.

3783. Preservative for Botanical Specimens.

Glycerine, 3 ounces; camphor water, 2 ounces; dissolve and keep in well corked bottles.

3784. Preservative for Botanical Specimens.

Glycerine jelly for botanical preparations: Soak 1 ounce gelatine in 6 ounces water for 2 hours, then add 7 drops of glycerine and 1 per cent. of carbolic acid, warm until the flocks caused by the acid disappear, and filter while still warm through glass-wool or tow.

3785. Preservative for Botanical Specimens.

The specimen is carefully spread out and placed between 2 thick sheets of blotting paper and pressed by a clean, smooth, heated dhoby's iron. The pressure by the

iron should be always downwards and sideways. For instance, if a rather big leaf has to be pressed by a small iron, the iron should be lifted straight up from the part already pressed and laid on the unpressed part with a downward pressure. If the iron be even slightly dragged across from one part of the leaf to the other, the leaf might be squeezed or distorted by the side-ward pressure thus exerted.

The pressing is done so as to remove the moisture from the leaf and to make it dry and smooth for keeping. If a specimen is very thick and fleshy, it will be better to press out the moisture gently and gradually rather than to attempt to do it too quickly. If the blotting paper becomes saturated after some of the leaves have been pressed, fresh blotters should be used for pressing any more that remain to be done, as the paper which has become thoroughly wet will be useless for the purpose.

When the pressing is over, the leaf should be carefully removed from between the sheets of blotting paper and mounted on card or thick paper after gently applying some liquid gum to the back of the leaf. If the mounting cannot be done immediately after pressing the specimen, it may be temporarily placed between the leaves of a book, and mounted afterwards, when convenient. The mounted specimens must be kept, as far as possible, without being bent or squeezed.

2786. To Preserve Botanical Specimens.

The requisites are two flat boards, 2 feet by 1½ feet, a supply of drying paper (gray filtering paper in sheets), several heavy weights (stones will serve the purpose), tragacanth paste, and cartridge paper. The first thing after you have brought the plants home is to dry them without delay. To do this, place one board on the floor with several sheets of paper upon it; then carefully spread out a specimen, keeping down with small pieces of drying paper and light weights any leaves or flowers which have a tendency to spring up from their position. When the whole is carefully spread out, place another sheet of paper over the specimen, starting from the bottom and removing weights as you go along. Add other three or four sheets of paper to the pile, then arrange other specimens in the same way, with thick pads of paper between, if the stems are thick. Finally, place the second board on the top, and load it with weights. Change the paper daily, drying the damp sheets before the fire. In a week or ten days the specimens will be ready for mounting. Cartridge paper is best for

mounting purposes; it should measure 18 by 12 inches.

The following is an excellent mounting medium:

Powdered tragacanth.....	6 drams.
Powdered acacia.....	4 drams.
Glycerine	3 drams.
Water	6 drams.
Perchloride of mercury.....	12 grains.

Mix in a mortar, and add, with dextrous stirring:

Boiling water.....	6 ounces.
Oil of cloves.....	10 drops.

The oil to be added before the paste becomes cold.

Spread a thin layer of this paste upon a board, place a specimen dextrously upon it, touching delicate parts with the forceps, then lift by grasping the strongest part of the stem with the forceps, and transfer to the cartridge paper. The specimen is now to be treated as if you were drying it, and placed under the press for a day. Finally, the thick part should be rendered secure by pasting a piece of thin muslin on the back and sewing the stem with a strong linen thread.

3787. Herbarium Specimens—Directions for Drying.

Obtain a half-dozen pieces of stout mill board, cut to about 12x18 inches. Then gather about a hundred old newspapers and fold them neatly to about the dimensions of the mill boards. Four or five yards of common white cotton wadding, a score of sheets of tissue paper, and as many of blotting paper, all cut to the same size, complete the apparatus. One of the boards serves as a foundation; on this place a newspaper, then a piece of wadding and upon this place the specimen intended to be dried. The cotton being soft and retentive, every portion can be laid in a proper and natural way, including the petals of flowers. A newspaper above (two or three, if the specimens have thick stems) and so on until all the specimens have been deposited similarly. If the specimens are hairy or sticky, or of a kind that the wadding seems likely to adhere to, then, before depositing them on it, introduce a half sheet of tissue paper. A heavy weight must be placed on top of all, sufficient to imbue the specimens in the wadding; then leave the whole to rest for twenty-four hours. All the papers must then be changed, dry ones being put in their places; and if the plant seems to throw off a very considerable amount of moisture, and renders the wadding quite damp, change the wadding also. A second or even a third

change is desirable at the end of two or three days or a week, and when this is made, introduce the blotting paper, pressing again until everything is flat and the specimens are dry. When thus dried, every petal and leaflet retains the form it had in life, and nine specimens out of ten preserve their color exactly. To insure the keeping of color, it is well, if time can be spared, to change the blotting paper many times, and to dry it thoroughly before a fire; this, however, need not be done until after the third day.

3788. Autumn Leaves, to Preserve.

Dry as quickly as possible, by putting the leaves between folds of any very absorbent paper, and change frequently—as often as once a day. A warm flat-iron judiciously used will help the drying, but overheating will spoil all. When the leaves are quickly and thoroughly dried, they will retain their colors for several months. In making up ornamental work, the leaves should have a light coat of boiled linseed oil. This brings out the color and gives a more natural color appearance than varnish of any kind. For fastening them to cardboard or any other support, glue is best. Do not oil the under sides of the leaves, as this will prevent the glue from adhering.

3789. Plants, to Preserve the Natural Colors.

Dissolve 1 part salicylic acid in 600 parts alcohol, heat the solution to boiling point in an evaporating vessel and draw the plants slowly through it. Shake them to get rid of any superfluous moisture, and then dry between sheets of blotting paper under pressure in the ordinary manner. Too prolonged immersion discolors violet flowers, and in all cases the blotting paper must be frequently renewed.

3790. Preserving Cut Flowers.

The flowers are cut early in the morning before the dew is off, and are thoroughly wet by dipping into a solution of sodium bicarbonate of a strength of about 1 part of the salt to 16 of water. After letting stand for a little time, they are then dipped in a saturated aqueous solution of salicylic acid, removed at once and placed under a bell glass for a short time to dry.

3791. Preservation of Cider.

When the saccharine matters, by fermentation, are being converted into alcohol, if a bent tube be inserted air tight into the bung, with the other end into a pail of water, to allow the carbonic acid gas evolved to pass off without admitting any

air to the barrel, a beverage will be obtained that is all that can be desired. A handy way is to fill the cask nearly up to the wooden faucet, when the cask is rolled so the bung is down. Get a common rubber tube and slip through the end of the plug in the faucet, with the other end in a pail of water. Then turn the plug so the cider can have connection with the pail. After the gas ceases to bubble up through the water, bottle or store the cider away.

3792. Preservation of Sweet Cider.

Dissolve in a barrel of 32 gallons, 1 ounce of salicylic acid. This is superior to sulphite of lime.

3793. Anti-Ferment for Cider.

Sulphite of lime; or equal parts of sulphite of lime and ground black mustard seed.

3794. Cider, to Preserve.

Salicylic acid is largely employed for this purpose. It is used in the proportion of about 1½ ounces to 50 gallons. Place the acid in some suitable container and pour upon it a sufficient quantity of cider and thoroughly mix before adding it to the contents of the barrel. If the acid be added directly to the cider in the barrel, it is very likely to float upon the top and not be dissolved. If no temperance scruples are in the way, you may dissolve the acid in a little alcohol, and add to the barrel. The time when this addition should be made depends on individual taste and circumstances, generally just when the first fermentation is completed. As the cider runs from the press, pass it through a hair sieve into a large open vessel. In a day or less the pomace will rise to the top, and in a short time become very thick. When little white bubbles break through it, draw off the cider through a spigot placed about three inches from the bottom. At this stage the acid may be added.

Another method, and one largely followed, is at this point to transfer the cider to clean, sweet casks, and when the bubbles again escape at the bung-hole, rack it again; repeat this a couple of times. Then fill up the cask with cider in every respect just like that originally contained in it, add a tumbler of warm sweet oil, and bung up tight. For very fine cider it is customary to add at this stage about ½ pound glucose, or a smaller portion of white sugar. The cask should then be allowed to remain in a cool place till the cider has acquired the desired flavor. In the meantime, clean barrels for its reception should be prepared as follows: Some clean strips of rags are dipped in melted sulphur, lighted and burned

in the bung-hole, the sulphur vapor being retained in the barrel. Then tie ½ pound mustard seed in a coarse muslin bag, and put it in the barrel, fill the barrel with cider, and add about ¼ pound isinglass or fine gelatine dissolved in hot water. This is an old-fashioned but very satisfactory method.

Professional cider makers are now using calcium sulphite instead of mustard and sulphur, ⅓ to ¼ ounce to each gallon of cider being dissolved in a little cider and poured into the barrel, which should then be thoroughly shaken or rolled. This calcium sulphite is on the market in packages just the size for one barrel of 32 gallons.

3795. To Preserve Rubber Tubing.

Rubber tubing, when not in use, should be neatly coiled in vessels of water carrying a small quantity of common salt in solution.

3796. To Preserve Ropes and Cordage.

Dry ropes immersed for four days in a bath containing 20 grains of sulphite of copper to a quart of water are for some time preserved from the attacks of animal parasites and rot.

3797. Egg Liquid.

Lime, 1 bushel (slaked with water); common salt, 2 or 3 pounds; cream tartar, ½ pound; water, quantity sufficient to form a mixture strong enough to float an egg. Used to preserve eggs, which it is stated it will do for two years, by simply keeping them in it. Simple milk of lime answers quite as well.

3798. Butter, to Preserve.

Powder finely and mix together 2 parts of the best salt, 1 of loaf sugar, and 1 of niter. To each pound of butter, well cleansed from the milk, add 1 ounce of this compound. It should not be used under a month. (Butter that has an unpleasant flavor is said to be improved by the addition of 2½ drams of bicarbonate of soda to 3 pounds of butter. A turnip flavor may be prevented by only feeding the cows with turnips directly after milking them.)

3799. To Prevent Decay in Wood.

Take 20 parts of resin, 46 parts of finely-powdered chalk, some hard sand, a little linseed oil and sulphuric acid; mix all together, and boil for a short time. This composition, if applied while hot, forms a kind of varnish, thereby preserving the wood.

3800. To Preserve Urine.

Add a few crystals of chloral hydrate, but it is doubtful whether the addition does not interfere with the subsequent examination, especially for the microscopical examination for crystals. Cells epithelia, casts, etc., do not seem to be interfered with. Thymol seems to be a good preservative of urine without having any apparent disadvantages. The chemical and microscopical examination of a dozen samples, preserved ten days with thymol, single crystals weighing 3 or 4 grains, gave the same result as the examinations before the addition of the stearopten did.

3801. Preserving Fluid for Pathological Specimens.

Common salt.....	100 grams.
Saltpeter	25 grams.
Carbolic acid.....	5 grams.
Glycerine	15 cubic cent.
Amylic alcohol.....	50 cubic cent.
or (Ethyllic alcohol.....)	100 cubic cent.)
Water	1,000 cubic cent.

Specimens should first be soaked in strong brine, and then placed in a large quantity of this fluid.

3802. Preservation of Leeches.

As soon as the leeches arrive from the dealer, they should at once be removed from the box, and washed thoroughly in soft water, which should be at 60 degrees F. The first washing rejected, they should then be placed in a jar half filled with water about the same temperature, with a piece of clean muslin placed over the mouth of the jar and covered with a perforated lid. Care must be taken that the water replaced be no colder than the water rejected or thrown away. The jar should be well cleansed inside every day or two in winter, and every day in warm weather, thus preventing the accumulation of any foreign matter along the sides of the jar, and the leeches taken out and gently rubbed between the fingers or between the folds of a soft cloth to free their bodies of the mucous or slimy substance which envelopes them. Guard also against the access of acrid vapors which may come in contact with the jar, such as ammonia, gas, and the vapor of mineral acids, which by their density find a ready means of access through the porous lid to become absorbed by the water in the jar, which after a short time would result fatally. If these precautions are carefully taken the leeches may be kept in a fine state of health, and there would be no likelihood of trouble in getting them to bite readily when applied to any part of the body.

3803. To Preserve Starch Paste.

Corrosive sublimate previously dissolved in the water used in preparing the paste.

3804. Liquid for Preserving Larvae, Insects, etc.

Sodium chloride, 2 parts; alum, 1 part; distilled water, 16 parts. To each pint add 1 grain of corrosive sublimate. Glycerine alone is a capital preservative for small objects, care being taken to add a small quantity of distilled water, as anhydrous glycerine in its avidity for water will otherwise abstract it and shrivel the tissues. Chloral hydrate in solution is another good preservative.

3805. Liquid for Preserving Larvae, Insects, etc.

Salicylic acid, 4 parts; boracic acid, 5 parts; potassium carbonate, 1 part; mix and dissolve by the aid of heat in a mixture of 96 parts of distilled water and 40 parts of glycerine. When solution is complete, add 100 parts of alcohol of 95 degrees, in which 3 parts each of oil of cinnamon and oil of cloves have been dissolved. This is a capital preservative of small animals, reptiles and batrachians.

3806. Liquid for Preserving Larvae, Insects, etc.

Make a stock solution of 1 part of salicylic acid dissolved in 100 parts pyroligneous acid.

For larvae, hydrae and nematoidea, take 3 parts of the solution, 10 parts glycerine and 20 parts distilled water.

For infusoria, take 2 parts glycerine, 8 parts distilled water and 1 part stock fluid.

For algae, desmids, etc., take 1 part glycerine, 20 parts distilled water and 1 part stock fluid.

3807. Preservation of Lemon Juice.

Mix the lemon juice with enough alcohol (about 50 per cent) to clear the juice. Set aside until perfectly clear; decant the clear liquid, distill off the alcohol at a very moderate temperature and put the remaining liquid into suitable bottles, which are heated to near the boiling point for about an hour and then hermetically sealed. By this method the flavor of the lime juice may be kept unaltered for a considerable length of time.

3808. To Preserve Fruit Juices.

The expressed juices are filtered through a filter prepared by stuffing absorbent lint cotton into the neck of the funnel or receiver and filling the latter to a certain height with pure silica, moderately coarsely

ground. Cleanly washed river sand, from which the dust and smaller particles have been sifted out, will answer, providing it has first been torrifled to remove all organic matter. The filtered juices are then poured into a small vessel (not over 1 liter capacity), placed in a water bath, and the temperature raised to 75 degrees C. (165 to 170 degrees F.), and kept thus for one hour (two would be better). In the meantime the ultimate containers or vessels in which the juice is to be sent to the trade are being sterilized in an oven especially prepared for the purpose, and from which they are only removed as needed for filling. When ready to fill, add to each liter of juice 10 centigrams of salicylic acid (1 part in 10,000), and pour into the sterilized bottle through a funnel, the neck of which is lightly packed with absorbent cotton. Cork quickly and seal at once. The corks should be paraffined. With twice the amount of salicylic acid (i. e., 1 to 5,000) the preliminary sterilization may be abandoned, but as the object is to get the juice as pure as possible, the former method is adhered to by the French factory. Salicylic acid, even when used in much larger proportions (20 and even 30 centigrams to the liter) is not discoverable by the taste, and the prolonged use of the juices prepared with it has produced no appreciable effect on the health of the users.

3809. Preservation of Fruit Juices.

The clarified juice is heated to boiling in a copper vessel and then poured into a dish. Meanwhile the bottles are provided with stoppers, and are then gradually filled, a space of about two centimeters in the neck being left empty; some alcohol is then poured upon the hot liquid, and the bottle is quickly stoppered, the cork being further secured as the liquid cools. The alcohol which evaporates into the empty space is sufficient for the preservation of the liquid. The juice of fresh herbs may be preserved in the same manner.

3810. Preservation of Syrups.

When the syrup is finished and while hot, it is transferred into bottles holding 2 or 4 fluid ounces or more, which are completely filled. A disc of very thick filtering paper is placed upon the mouth of each, the diameter of the disc being a little larger than that of the mouth of the bottle. These discs become impregnated with the liquid. It contracts somewhat when the syrup cools, and the paper discs assume a concave shape. The aqueous portion of the syrup taken up by the

discs has meanwhile evaporated, and the discs, encrusted with crystallized sugar, form an impermeable barrier to the external air and germs contained in it.

3811. Preservation of Essential Oils.

Essential oils which easily resinify and assume a turpentine odor, can be kept indefinitely by adding sodium bisulphite in the proportion of fifty grains to one pound.

3812. Preserving Vinegar, Glue, Ink, Etc.

Add about $\frac{1}{4}$ to $\frac{1}{2}$ per cent of formic acid to the liquid to be preserved. Formic acid, used in about the same proportions, has been highly recommended as a preservative of fruit juices.

3813. Embalming Fluid.

Potassium chlorate.....	4 ounces.
Aluminum sulphate	6 ounces.
Chlorinated lime	4 ounces.
Arsenious acid	4 ounces.
Corrosive sublimate	2 ounces.
Water	2 gallons.

3814. Embalming Fluid.

Mix together 5 pounds dry sulphate of aluminum, 1 quart warm water, and 100 grains arsenious acid. Inject 3 or 4 quarts of this mixture into all the vessels of the human body.

3815. Embalming Fluid.

A simple form of injection suitable for anatomical specimens consists of glycerine, 14 parts; soft sugar, 2 parts; potassium nitrate, 1 part. This has been found to be very efficient, as the parts saturated with it become comparatively indestructible, and change neither in size nor figure.

3816. Embalming Fluid.

Arsenious acid	14 parts.
Caustic soda	7 parts.
Carbolic acid,	

Water, of each a sufficient quantity.

Dissolve the arsenious acid and the soda in 20 parts of water by the aid of heat. Allow the solution to cool, and then add to it just enough carbolic acid to render it opalescent. Finally add enough water to make the product weigh 100 parts.

3817. Embalming Fluid.

	For Injecting.	For Immersing.
Arsenious acid.....	16 gms.	12 gms.
Sodium chloride....	80 gms.	60 gms.
Potassium sulphate	200 gms.	150 gms.
Potassium nitrate..	25 gms.	18 gms.
Potassium carbon- ate	10 gms.	15 gms.
Water	20 lit.	10 lit.
Glycerine	4 lit.	4 lit.
Wood naphtha.....	$\frac{3}{4}$ lit.	$\frac{3}{4}$ lit.

3818. Embalming Fluid.

Salicylic acid 4 drams.
 Boracic acid 5 drams.
 Potassium carbonate..... 1 dram.
 Dissolved in hot water.. 12½ ounces.
 Glycerine 5 ounces.

Then add oil cinnamon, oil cloves, each 3 drams, dissolved in alcohol, 12½ ounces.

3819. Embalming Fluid.

Arsenious acid 20 parts.
 Bichloride mercury 30 parts.
 Alcohol 200 parts.
 Carbolic acid water (5
 per cent 3,250 parts.

The quantity required in the case of adults is 5 to 6 quarts.

3820. Embalming Fluid.

Thymol 15 grains.
 Alcohol 3 fl. drams.
 Glycerine 10 fl. ounces.
 Water 5 fl. ounces.

Dissolve the thymol in the alcohol, add the glycerine and then the water. This has also been extensively used for preserving anatomical and museum specimens.

3821. Brunelli Embalming Process.

The circulatory system is cleansed by washing with cold water until it issues quite clear from the body. This may occupy from 2 to 5 hours. Alcohol is then injected so as to extract as much water as possible. This requires about 15 minutes. Ether is then injected to extract the fatty matters; this requiring from two to ten hours. A strong solution of tannin is then injected and allowed to be absorbed by the tissues, which should require from two to ten hours. The body is then dried in a current of warm air which has been passed over calcium chloride. This may occupy from two to five hours, when the operation is complete.

3822. Beal's Injecting Fluid.

Potassium ferrocyanide.. 150 grains.
 Tincture ferric chloride.. 6 drams.
 Ethylic alcohol..... 10 ounces.
 Methylic alcohol..... 15 drams.
 Glycerine 10 ounces.
 Water 40 ounces.

Dissolve the ferrocyanide of potassium in 10 ounces of the water, mix the tincture of iron with 10 ounces of the water. Add the solution of iron to the solution of ferrocyanide of potassium, drop by drop, with constant stirring. Mix the alcohols, glycerine and remaining water together, and add it in portions to the iron and ferrocyanide mixture, being careful to shake violently after each addition. If the iron

solution is not added in very small portions and constant brisk stirring to the ferrocyanide solution, a precipitate is formed that will settle very readily and consequently cannot be used as an injecting fluid.

3823. Anatomical Preserving Liquid.

Muriate of quinine..... 5 parts.
 Marine salt..... 6 parts.
 Glycerine 100 parts.
 Water 900 parts.

The only inconvenience attending the use of this solution is that it takes out all the coloring matter, the specimens assuming a very pale hue.

3824. Preserving Anatomical Preparations.

Prepare a solution of 5½ ounces chloride of sodium, 640 grains sugar, 320 grains nitrate of potassium, in 34 fluid ounces of water, and acidulate it by the addition of about 3 per cent. of boric or tartaric acid. The object of this acidulation is to convert the haemoglobin in the specimen into haematin. Immerse the specimens in the solution, and then dilute the latter with enough water to cause the specimens to sink. After 6 or 8 weeks they are then transferred to a fresh, colorless solution prepared from the same ingredients.

The process may also be carried out by using the above solution diluted with ¼ or ½ of its volume of water. In this case the specimens are covered with the liquid, care being taken that all inclosed air-bubbles are expelled, and the vessels completely filled with the liquid, so that it will touch the lid when this is put on.

INCENSE, FUMIGANTS.

3825. Incense.

Benzoin 4 ounces.
 Storax 4 ounces.
 Labdanum 6 ounces.
 Myrrh 6 ounces.
 Cascarilla 3 ounces.
 Oil cinnamon 8 minims.
 Oil lavender 20 minims.
 Oil bergamot..... 20 minims.
 Oil cloves 20 minims.

Mix, and pass through a coarse sieve.

3826. Incense.

Powdered cascarilla..... 2 ounces.
 Myrrh 1 ounce.
 Styrax 1 ounce.
 Benzoin 1 ounce.
 Thus 1 ounce.
 Burgundy pitch 1 ounce.

3827. Incense.

Frankincense 3 parts.
Benzoin 3 parts.
Amber 3 parts.
Lavender flowers..... 1 part.

This is designed to be ignited upon coals, a stove, or hot iron to diffuse an agreeable aroma in an apartment and incidentally to destroy noxious effluvia.

3828. Incense.

Styrax 2½ ounces.
Benzoin 12 ounces.
Musk 15 grains.
Burnt sugar..... ½ ounce.
Frankincense 2½ ounces.
Gum tragacanth..... 1½ ounces.

Rose water, sufficient to form a mass.
To be divided into small tablets.

3829. Incense Powder.

Powdered gum galbanum... 1 pound.
Powdered nitrate of potassium 1 ounce.

Mix them.

3830. Ribbon of Bruges for Incense.

Undressed tape is first steeped in a solution of potassium nitrate and dried; then steeped in a strong tincture of gum resins. The ribbon, cut into lengths, is now coiled into vases, through a slit in the lids of which an end of the ribbon projects. On lighting the projecting end, and blowing out the flame, the ribbon smolders, and the fragrance effuses itself into the air. The smoldering is extinguished when it reaches the slits of the vase.

The Nitre Solution—

Potassium nitrate..... 8 ounces.
Water 1 gallon.

Bottle A—

Gum benzoin..... 1½ pounds.
Gum myrrh..... 4 fl. ounces.
Extract orris root..... 40 ounces.

Allow to stand for 1 month.

Bottle B—

Alcohol, 60 degrees over proof.
Pod musk 2 ounces.
Oil of rose..... ½ ounce.

Allow to stand for 1 month.

The contents of bottles A and B are mixed, the tape steeped for 12 hours in the solution of nitre and then dried; it is then passed through the tincture and again dried, when it is ready for use.

3831. Holy Incense Powder.

Ground gum benzoin..... ¼ pound.
Ground cascarilla bark.... ¼ pound.
Ground sandalwood..... ½ pound.
Powdered nitrate of potassium 1 ounce.
Grain musk..... 10 grains.

Mix the ingredients thoroughly. To be kept in an air-tight vessel.

2832. Incense Powders.

Santal wood powder..... 1 pound.
Cascarilla bark powder.... ½ pound.
Benzoin powder..... ½ pound.
Vetivert 2 ounces.
Nitrate of potassium (salt-peter) 2 ounces.
Grain musk..... ¼ dram.

Sift the whole well together several times through a fine sieve.

3833. Pastilles (Aromatic).

Roasted coffee..... 75 parts.
Wood charcoal..... 25 parts.
Boric acid..... 25 parts.
Sugar 60 parts.

Pulverize each separately, and very fine; mix; add vanilline to flavor and mucilage of tragacanth to form a mass. Divide into pastilles.

3834. Scott's Disinfecting Pastilles.

Wax..... 50 parts.
Sulphur 20 parts.
Saltpetre 10 parts.
Charcoal in powder..... 10 parts.
Flour paste 10 parts.
Plaster of Paris, a trace.

Mix, and make into pastilles or bougies. To be burned on a saucer or otherwise.

3835. Pastilles for Burning.

Powdered cascarilla..... 8 ounces.
Benzoin 4 ounces.
Yellow saunders..... 2 ounces.
Styrax calamita..... 2 ounces.
Olibanum 2 ounces.
Charcoal 6 ounces.
Mucilage of tragacanth, q. s.

Reduce the substances to powder and form into a paste with the mucilage, and divide into small cones with a tripod base.

3836. Paris Pastilles.

Benzoin 125. parts.
Cascarilla bark..... 125. parts.
Myrrh 41.5 parts.
Wood charcoal..... 750. parts.
Oil of nutmeg..... 25. parts.
Oil of cloves..... 25. parts.
Saltpetre..... 66.5 parts.
And the necessary quantity of solution of gum tragacanth.

3837. Fumigating Pastilles.

Benzoin 1 ounce.
Cascarilla bark..... 1 ounce.
Myrrh 2½ drams.
Oil nutmegs..... 1 dram.
Oil cloves 1 dram.
Oil cinnamon..... ½ dram.
Saltpetre 4 drams.
Charcoal, powdered..... 8 ounces.
Mucilage, q. s.

Make into small cones.

3838. Cheap Fumigating Pastilles.

Gum benzoin, powdered... 2 ounces.
 Cascarilla, powdered..... 2 ounces.
 Myrrh, powdered..... 1 ounce.
 Saltpetre, powdered..... ½ ounce.
 Chlorate of potassium,
 powdered..... 1 dram.
 Charcoal, powdered..... 4 ounces.
 Oil of cloves..... 1 dram.
 Oil of cinnamon..... 1 dram.
 Oil of lavender..... 1 dram.
 Oil of sandal wood..... 1½ drams.
 Mucilage of tragacanth, sufficient.

To form a stiff paste. Make into cones and set aside to dry.

3839. Fumigating Pastilles.

Charcoal 6 parts.
 Frankincense ½ part.
 Juniper wood..... ¼ part.
 Liquid storax..... ¼ part.

The mixture is formed into a paste with starch paste, and cones made of this.

3840. White Fumigating Pastilles.

Pulverized lime wood..... 8 parts.
 Benzoin 1 part.
 Mastice 1 part.
 White Peruvian balsam..... ½ part.
 Mix with as much solution of gum tragacanth as required.

3841. Perfumed Pastilles.

Wood charcoal powder..... 500 parts.
 Benzoin 375 parts.
 Tolu balsam..... 125 parts.
 Vanilla beans..... 125 parts.
 Cloves 125 parts.
 Oil of sandal wood..... 3 parts.
 Oil of neroli..... 3 parts.
 Saltpetre..... 50 parts.
 And the necessary quantity of the solution of gum tragacanth.

3842. Vichol Fumigating Candles.

Wood charcoal..... 100.0
 Potassium nitrate..... 5.0
 Naphthaline 10.0
 Creosote 10.0
 Carbolic acid..... 5.0
 Crude petroleum..... 12.5
 Aconite root..... 1.0
 Tragacanth 2.0
 Water, q. s.

Mix, and make into 36 candles.

3843. Fumigating Tablets.

Melt together 20 parts of benzoin, 20 of balsam of tolu, and 40 of balsam of Peru, at as low a heat as possible, and add to the melted mass 150 parts of "Brettfield spirit." When the mixture is cool add 4 parts of acetic acid, 2 parts of tincture of musk, and 1 part of oil of rose, and mix the whole with enough magnesia or infusorial earth to

make a plastic mass free from adhesiveness. Roll this out, and cut it into round tablets, about 3 to 5 centimeters in diameter, which are to be wrapped in tin foil. When laid upon a hot stove or other place having a proper temperature, these tablets diffuse their aroma very uniformly, and much more pleasantly than is usually the case when some other form of fumigation is used.

Brettfield spirit is made as follows: Digest 230 parts of orris root and 0.15 parts of musk in 2,000 parts of alcohol, filter after sufficient maceration, and add to the filtrate 60 drops each of oil of rose and oil of lemon, and 70 drops of oil of neroli.

3844. Fumigatory Powder and Paper.

Bisulphite of potassium..... 5 parts.
 Nitrate of potassium..... 4 parts.
 Peroxide of manganese, quantity sufficient to blacken the mixture.

Pulverize separately and mix carefully. When fumigation is required, throw a few grams on a red-hot shovel. An agreeable odor is afterward produced by burning paper made as follows:

Nitrate of potassium..... 1 part.
 Sugar 2 parts.

Arc dissolved in 6 parts of water. Unsized paper is plunged into this solution and dried.

DYES FOR WOOL.

3845. Black Dye for Wool.

For 5 pounds of goods. For the first bath, bichromate of potash, 8 ounces; alum, 6 ounces; fustic, 4 ounces. For the second bath, logwood, 4 pounds; barwood and fustic, of each 4 ounces; to which add, after the first lift, copperas, 4 ounces, and work for 15 minutes.

3846. Black Dye for Wool.

For each pound of goods take logwood chips, ½ pound; extract of logwood, 1 ounce; madder, 1 ounce; fustic, ½ ounce. Boil the dyes in a sufficient quantity of water to cover the goods, for one hour; then boil the goods in the solution for one hour, stirring continually; take out and add copperas, 1 ounce, and boil one-half hour. Take them out again and add copperas, ½ ounce; sodium bicarbonate, 1 ounce, and run the goods another half hour. Wash out the goods in strong soapsuds. This makes a good, bright and durable black if the formula be closely followed.

3847. Black Dye for Wool.

For 7 pounds of goods. Take of galls (bruised) ¼ pound; logwood chips, 1½ pounds; for the bath; boil or work the

goods for two hours; take them out, and add $\frac{1}{4}$ pound copperas; when it is dissolved, work the goods through the liquor for at least two hours, keeping the bath nearly boiling; again take them out, wash, and air; then add 1 ounce more of copperas to the bath, and pass the goods through it for another hour; lastly air, rinse, and finish.

3848. Jet Black Dye for Wool.

Boil for 90 minutes with $2\frac{1}{2}$ per cent of bichromate potassium and 2 per cent of sulphuric acid. Lift, spread out and let lie till quite cold, and dye in a second water with 40 per cent of logwood, 8 per cent fustic and $1\frac{1}{2}$ per cent bluestone. After boiling for an hour, wash, dry.

3849. Blue Dye for Wool.

For each pound of goods, sulphuric acid, prussiate of potassium, of each 2 ounces; crude tartar, 4 ounces. Put the ingredients in a kettle with sufficient water to cover the goods; heat, and, when lukewarm, put in the goods. Keep them in the solution for two hours and finally boil for one-half hour. The durability of this color may be increased by putting the dyed goods in clean water with 4 ounces of alum for each pound of goods, and boiling for one hour. If not dark enough, add logwood to suit and boil again.

3850. Blue Dye for Wool (Quick Process).

For 2 pounds of goods. Alum, 5 ounces; cream of tartar, 3 ounces; boil the goods in this for 1 hour; then throw the goods into warm water, which has more or less of the extract of indigo in it, according to the depth of the color desired, and boil again until it suits, adding more of the blue if needed. It is quick and permanent.

3851. Blue Dye for Wool.

Triturate 1 pound of indigo with water and a little caustic potash; then add 3 pounds of lime, and afterwards $2\frac{1}{2}$ pounds of sulphate of iron in solution, stirring them well together.

The solution contains refined indigo, which is soluble in lime and alkalies. The cotton, linen, etc., to be dyed is repeatedly dipped in the solution, and afterwards rinsed in water acidulated with hydrochloric acid.

3852. Blue Dye for Wool.

For each pound of goods, take alum, 4 ounces; cream tartar, 2 ounces. Boil one hour. Empty the kettle, rinse the goods, and refill the kettle with clean water and bring to a scalding heat, adding of indigo blue or chemic blue, until the color suits.

3853. Dark Blue Dye for Wool and Yarns.

Boil the material for one hour in a solution of $2\frac{1}{4}$ ounces of alum in hot water, then take it out and throw away the bath. Now boil in the same boiler $5\frac{3}{4}$ ounces of logwood in pure water for one-half hour; then lift out the bag which contained the logwood, and place the material, which has been previously washed, into the decoction, work it for one-half hour, and then let it boil for one-half hour longer. The bath is now cooled by adding cold water, the material lifted out and $2\frac{1}{4}$ ounces of potash are dissolved in the bath, when the material is worked in it until it has assumed a beautiful blue color.

3854. Dark Blue (Fugitive) for Wool.

Boil clear water, and add $5\frac{3}{4}$ ounces of blue vitriol, $1\frac{1}{4}$ ounces of green vitriol, 1 pound of alum, $13\frac{1}{4}$ ounces of crude tartar, $2\frac{1}{4}$ ounces of tin salt, and 1 ounce of crude nitric acid. Boil the goods in the mixture for one hour. They are then lifted out and allowed to stand for one day and washed. Clean water is then heated in a boiler, $2\frac{1}{2}$ pints of extract of logwood added, and the goods worked in this for one-half hour, during which the heat is raised to the boiling point. From $27\frac{1}{2}$ to 33 pounds of woollen goods can be dyed by the above process.

3855. Dark Blue for Wool.

For 5 pounds of wool, dissolve 2 ounces of bichromate of potassium and 1 ounce of alum in sufficient water to cover the goods, by boiling. The wool, being free from grease, and wet, is put into the solution and boiled for one hour, stirring occasionally, lifted out, allowed to drip, aired and rinsed, while the bichromate solution is thrown away and replaced with clean water. Add $2\frac{1}{2}$ pounds of logwood chips, sewed up in a bag and boiled for one hour; the wool is then put in and the boiling continued for an hour more, after which it is to be lifted out, aired, washed and dried. Extract of logwood, $6\frac{1}{2}$ ounces, can be substituted, if preferred, for the logwood chips, but the shade produced is not so desirable as that first suggested.

3856. Imperial Blue for Wool.

Water 1 gallon.

Sulphuric acid, a wineglassful.

Imperial blue, 1 tablespoonful or more, according to the shade required.

Put in the silk, worsted or wool, and boil 10 minutes; wash in a weak solution of soap lather. Can be used for silk or worsted.

3857. Pigeon Blue for Wool.

Work for 40 minutes in 2 ounces bi-chromate potassium, 4 ounces alum, and 1 ounce tartar; wash out in cold water, and then work for 30 minutes in another bath made up with 3 pounds of logwood; lift, and add 1 ounce verdigris; work for 15 minutes, wash and dry.

3858. Sky Blue for Wool.

Water, 1 gallon; sulphuric acid, a wine-glassful; sodium sulphate in crystals, 2 tablespoonfuls; liquid extract of indigo, 1 teaspoonful. Boil the goods about 15 minutes; rinse in cold water.

3859. Brown for Wool.

Work for an hour in a bath made up with 2 pounds of fustic, 2 pounds madder, 1 pound peachwood, and 4 ounces of logwood; lift and add 2 ounces copperas; work for 30 minutes, wash and dry.

3860. Brown for Worsted or Wool.

Water 3 gallons.

-Bichromate of potash..... $\frac{3}{4}$ ounce.

Boil the goods in this 40 minutes; wash out in cold water. Then take 3 gallons water, 6 ounces peachwood, and 2 ounces turmeric. Boil the goods in this 40 minutes; wash out.

3861. Brown (Chestnut) for Wool.

Boil in pure water for five minutes $\frac{1}{2}$ ounce of madder, a like quantity of sumach or $\frac{1}{4}$ ounce of gall-nuts, $\frac{1}{2}$ ounce of tartar and $1\frac{1}{4}$ to $2\frac{1}{4}$ ounces of saunders wood. Place the goods in the bath and let them boil for one and one-quarter hours. Then lift them out, cool the bath by adding cold water; then dissolve $\frac{1}{2}$ ounce of green vitriol in it, and work the wool in this for one-half hour longer.

3862. Brown (Coffee) for Wool.

Boil in pure water for five minutes $4\frac{1}{2}$ ounces of saunders wood, $2\frac{1}{4}$ ounces of sumach or gall-nuts and 1 ounce of green vitriol. The bath is cooled by adding cold water, the goods are placed in it and boiled slowly for half an hour, when they are taken out and the fire is extinguished; $2\frac{1}{4}$ ounces of green vitriol are then dissolved in the bath, in which the goods are worked for three-quarters of an hour, cooled and rinsed.

3863. Dark Brown for Wool.

Camwood, 4 ounces; fustic, $\frac{1}{2}$ pound; boil one-half hour in sufficient water to cover the goods, then put in the goods and boil for one hour. Add blue vitriol, $\frac{1}{2}$ ounce, and copperas, 2 ounces; boil one hour and rinse.

3864. Brown (Dark) for Wool.

Boil in water $4\frac{1}{2}$ ounces of saunders wood and $2\frac{1}{4}$ ounces of logwood; add $2\frac{1}{4}$ ounces of sumach or gall-nuts, and 1 ounce of green vitriol. Cool the mixture by adding cold water, then place the goods in it and let them boil slowly for one-half hour, when they are taken out. Should the dye not be dark enough, add 1 ounce more of green vitriol, and repeat the operation.

3865. Dark Snuff Brown for Wool.

For 50 pounds of goods, take 10 pounds camwood, boil in a sufficient quantity of water for 20 minutes; dip the goods in the solution for three-quarters of an hour, take them out, and add to the dye 25 pounds of fustic. Boil the solution for 12 minutes and dip the goods three-quarters of an hour; add 10 ounces blue vitriol, copperas, $2\frac{1}{2}$ pounds, dip again 40 minutes, adding more copperas if the shade is required to be darker.

3866. London Brown for Wool.

For each 20 ounces of goods take camwood, 7 ounces. Boil the goods and the camwood together for two hours; add blue vitriol, 2 ounces, and boil one-half hour. If not dark enough, add more blue vitriol and a little copperas and put in again. If a very dark brown is desired, add a little soft soap, or about an ounce of bicarbonate of sodium.

3867. Madder Brown for Wool.

For each pound of goods, 2 ounces each of madder and camwood; 4 ounces fustic; boil them in sufficient water to cover the goods for 15 minutes, then boil the goods in the solution for one-half hour. Take out and air them, boil again for one hour; now add to the solution blue vitriol and copperas, of each 1 ounce, and boil one hour more; if not dark enough, add more copperas, and rinse.

3868. Claret for Wool.

Water 3 gallons.

Cudbear 12 ounces.

Logwood 4 ounces.

Old fustic..... 4 ounces.

Alum $\frac{1}{2}$ ounce.

Boil the goods in the mixture 1 hour. Wash. This will dye from 1 to 2 pounds of material.

3869. Crimson for Wool.

Alum, cream of tartar, of each 1 ounce; cochineal, $\frac{1}{2}$ ounce; goods, 1 pound. Put $1\frac{1}{2}$ gallons soft water in a kettle, add the cochineal, well pulverized, bring the water to a boil, enter the goods and boil for one-half

hour. Take out the goods and air them. Cool the dye and add the alum and cream of tartar, and enter the goods again and boil one hour. If not dark enough, add a little bicarbonate of sodium. Wash, clean and dry.

3870. Gray (Fast Dark) for Wool.

The cloth is first grounded blue with indigo, and then boiled in a solution of $8\frac{1}{4}$ ounces of blue vitriol, $4\frac{1}{2}$ ounces of tartar, and some indigo tincture.

3871. Gray (Dark) for Wool.

Put 1 pound of logwood and $13\frac{1}{4}$ ounces of sumach in a small bag and boil them for one-half hour in a boiler full of water. Then take the bag out, place 13 pounds of cloth, previously moistened with hot water, in the bath, and let it boil for 1 hour, when it is lifted out. The bath is then cooled by adding cold water; $8\frac{3}{4}$ ounces of green vitriol are added and the goods worked in it for one-half hour, and then boiled until they have acquired the desired shade.

3872. Green for Wool.

For 11 pounds.—Add to water, 26 ounces, ground fustic, boil up, remove the wood, dissolve $3\frac{1}{4}$ pounds alum and 1 pound argols in the bath, stir well up, and add 3 ounces extract of indigo, let dissolve, cool, enter the yarn, and dye for half an hour at a boil.

3873. Bottle Green for Wool.

Work the goods for an hour in a bath with 2 ounces bichromate of potassium and 4 ounces alum; lift out and expose to the air till cold; then work for an hour in a second bath with 3 pounds fustic, $1\frac{1}{2}$ pounds logwood; wash out and dry.

3874. Green (Brownish Olive) for Wool.

Boil $2\frac{1}{4}$ ounces of fustic and 1 ounce of madder, then add to the fluid $2\frac{1}{4}$ ounces of tartar and 1 dram of gall-nuts. Place the goods in the bath, let them boil for one and one-half hours, take them out and cool them in the open air. The bath is cooled by adding cold water, and compounded with $\frac{1}{2}$ ounce of green vitriol, when the goods are placed back in it, worked for one-half hour, cooled and rinsed.

3875. Lilac for Wool.

Dissolve $\frac{3}{4}$ ounce of crystallized tartar and $2\frac{1}{4}$ ounces of alum in hot water, add $\frac{1}{2}$ ounce of pulverized cochineal to the solution, work the goods in the bath for one-half hour, and then boil them for one-half hour.

3876. Mulberry Color for Wool.

For 11 pounds of goods.—Boil for an hour and a half with $2\frac{3}{4}$ ounces chromate of potash, 7 ounces alum, $1\frac{1}{4}$ ounces blue vitriol and $5\frac{1}{2}$ ounces prepared tartar. Let cool in the lot, or rinse at once. Then dye in a water with 30 ounces logwood, $5\frac{1}{2}$ pounds camwood and 1 pound cudbear, boiling for 75 minutes.

3877. Olive for Wool.

Work for an hour in a bath with 4 ounces chrome, 2 ounces alum; lift and expose to the air, then work for an hour in a bath with 3 pounds fustic, $1\frac{1}{2}$ pounds camwood, 1 pound logwood; lift out and dry.

3878. Red for Wool.

For 40 pounds of goods, make a tolerably thick paste of lac dye and sulphuric acid, and allow it to stand for a day. Now take 4 pounds cream of tartar, $2\frac{1}{2}$ pounds solution muriate of tin, and 3 pounds of the above paste, make a hot bath with sufficient water, and enter the goods for three-quarters of an hour. Clean, rinse and dry.

3879. Red Madder for Wool.

To 100 pounds of fabric, use 20 pounds of alum, 5 pounds of tartar, and 5 pounds solution muriate of tin. After these are dissolved, enter the goods, and let them boil for two hours; then take them out, let cool, and lay over night. Into fresh water stir 75 pounds of good Holland madder. Enter the fabric at 130 degrees F., and bring the temperature up to 200 degrees F. in the course of an hour, during which time it must be handled well to prevent spotting. Rinse and dry.

3880. Red Madder for Wool.

For each pound of goods use alum, 4 ounces; cream of tartar, 2 ounces; Dutch madder, $\frac{1}{2}$ pound; bran, $\frac{1}{2}$ bushel.

Put the bran in a clean barrel and pour on hot water enough (the bran will take up considerable), let stand until it sours, strain, and press out, using the liquid for the dye. Boil the goods for two hours in the alum and cream of tartar with sufficient water to cover them well, then empty the kettle and rinse the goods. Fill the kettle with the bran water, and put in the madder. As soon as it is lukewarm, put in the goods and stir or handle them often for one-half hour; then take them out and air them. Put in again and gradually increase the heat so that in one hour it may just reach the boiling point. They are now taken out and washed thoroughly in strong soapsuds, rinsed well, and dried.

3881. Common Red for Wool.

Make a decoction of 3 pounds sumach, and put the goods in at once; let them steep over night; wring out and work for an hour in a mixture of 4 or 5 ounces solution muriate of tin to every gallon water; wring out and wash well; then work for half an hour in a decoction of 3 pounds lima wood and 1 pound fustic, using the decoction as hot as the hand can bear it; lift, and add 4 ounces of the murlaté of tin solution, then work for 15 minutes more; wash out and dry.

3882. Scarlet for Wool.

Work for an hour in a bath with 1 pound of tartar, 2 ounces dry cochineal, 8 ounces sumach and 8 ounces fustic; wash out and dry.

3883. Scarlet for Wool.

For 1 pound of goods, boil $1\frac{3}{4}$ ounces cream of tartar in water in a block-tin vessel; add $1\frac{3}{4}$ ounces muriate of tin solution; boil for 3 minutes, then boil the goods in it for 2 hours; drain and let the goods cool. Next boil $\frac{1}{4}$ ounce cream of tartar for a few minutes in some water; add to it 1 ounce powdered cochineal, boil for 5 minutes, adding gradually 1 ounce tin spirits, stirring well all the time; then put in the goods and dye immediately.

3884. Scarlet for Wool.

Cochineal, solution muriate tin, of each 1 ounce; cream of tartar $\frac{1}{2}$ ounce; goods, 1 pound. Put in a clean iron kettle $1\frac{1}{2}$ gallons of soft water for each pound of goods. When it is lukewarm put in the cochineal, which should be well pulverized. When scalding hot, add the cream of tartar and the solution muriate of tin, and stir well. Boil for one hour, stirring constantly all the time to prevent spots. Rinse in clean water and dry.

3885. Snuff Color for Wool.

For each pound of goods, camwood, 2 ounces, and fustic, $\frac{1}{2}$ pound. Boil the camwood and fustic for one-half hour in sufficient water to cover the goods; then put them in and boil one hour. Take out the goods and add blue vitriol, $\frac{1}{2}$ ounce; copperas, 1 ounce; boil one hour and rinse well.

3886. Tan for Wool.

Camwood, 4 ounces; madder, 2 ounces; for each pound of goods. Boil the dyes in a sufficient quantity of water for ten minutes; then put in the goods and boil one hour, afterwards adding $\frac{1}{2}$ ounce copperas; boil one-half hour longer, and if not dark enough add more copperas and boil again.

3887. Wine Color for Wool.

For each pound of goods take camwood, 7 ounces, and boil one-half hour; put in the goods and boil one hour; then add blue vitriol, 3 ounces, and boil one-half hour. If not dark enough add more blue vitriol and boil again.

3888. Yellow for Wool.

Alum, 4 ounces; cream of tartar, 1 ounce; fustic, 1 pound. Sufficient for 1 pound of goods. Boil the goods one hour in sufficient water to cover them well, to which the alum and cream of tartar have been added. Then empty the kettle and fill with cool water, put in the fustic and raise to the boiling point, put in the goods and boil for one hour.

3889. Yellow for Wool.

To each pound of goods, alum, 4 ounces; cream of tartar, 1 ounce; fustic, 1 pound. Boil the goods 1 hour with the alum and tartar in sufficient water to cover them well. Then empty your kettle and fill with clean water, and put in the fustic, bring the kettle to a boil, put in the goods and boil 1 hour. Rinse.

3890. Yellow (Dark) for Wool.

Place $3\frac{3}{4}$ pounds of quercitron bark in a bag, boil it in a tin boilerful of water for quarter hour. Then add 2 pounds of alum, 1 ounce of tartar, and $8\frac{3}{4}$ ounces of tin salt. Now boil the goods in the bath for 8 to 10 minutes, when they are taken out. Cool the bath by adding cold water, work the wool.

3891. Deep Yellow for Wool.

To a tub of cold water add 1 pound acetate of lead, and 1 pound nitrate of lead in solution; work the goods in this for 30 minutes, and wring out; then to a tub of warm water, add 12 ounces bichromate of potassium and work the goods in it 15 minutes; expose to the air for half an hour, then pass again through both solutions, working them the same time in each as before, and expose to the air for one hour; then pass them through the lead solution; wring out, wash and dry. If the color is not deep enough they may be passed through the solutions again, observing the same rules.

New woollen goods are prepared for dyeing by first steeping the cloth or yarn over night in soap lye, and then scouring them through clean soap to remove all oil or grease. Instead of soap a scouring mixture may be prepared with 1 pound soft soap, and 1 pound common soda in 10 gallons water. Goods to be re-dyed, must first be steeped and scoured in soap and soda.

DYES FOR COTTON.

3892. Black for Cotton.

For 10 pounds of goods. Prepare a lukewarm bath of 1 pound of dry extract of logwood and $1\frac{3}{4}$ quarts of water. Dissolve further 2 pounds of dry extract of logwood in 2 gallons of water. Now dye 2 pounds of the goods in this dye-bath, take it out, wring it, and let it dry in the open air. One-quarter of the first solution is then added to the bath, and the second one-fifth of the goods treated therein. The same process is repeated with the remaining goods until all the solution has been used.

3893. Black for Cotton.

Prepare the bath by dissolving $8\frac{3}{4}$ ounces of bichromate of potash and $2\frac{1}{2}$ ounces of crystallized soda in 2 gallons of water. After the first one-fifth part of the goods has been taken from the dye-bath one-quarter of the solution is added to it; the next portion of the goods is added, and so on.

3894. Black for Cotton.

The goods are steeped in a mordant of acetate of iron, worked well, and then passed through a bath of madder and logwood for two hours. This is less permanent than the preceding.

3895. Black for Cotton.

The goods, perviously dyed blue, are steeped for about 24 hours in a decoction of gall nuts or sumach, then drained, rinsed in water, and passed through a bath of acetate of iron for a quarter of an hour; they are next again rinsed in water, and exposed for some time to the air; after which they are passed a second time through the bath, to which a little more iron liquor is previously added. The whole process is repeated, if necessary, according to the intensity of the shade of black desired.

3896. Black for Cotton.

For 10 pounds of cloth. The goods are put into a boiling bath made of 3 pounds of sumach, and allowed to steep with occasional "working," until the liquor is perfectly cold; they are next passed through lime water, and, after having drained for a few minutes, immediately transferred to and worked for an hour in a warm solution of 2 pounds of copperas; after free exposure to the air for about an hour they are again passed through lime water, and, after draining, "worked" for an hour in a bath made with 3 pounds of logwood, and 1 pound of

fustic; they are then lifted, and $\frac{1}{4}$ pound of copperas being added, they are returned to the bath, worked well for about 30 minutes, and finished. Good and deep.

3897. Aniline Black for Cotton.

For each pound of cotton goods take 31-5 of bluestone dissolved in water, made very feebly acid with muriatic acid. Give seven turns and wring well. Dissolve $\frac{1}{2}$ pound hyposulphite of soda per gallon water at 120 degrees F., five turns, and wash out. Dye cold in chlorate of potash, 3 ounces; sal ammoniac, 3 ounces; muriate of aniline, $\frac{1}{2}$ pound, in sufficient water, six turns quickly and wring well. Hang up even at 77 degree F. for forty-eight hours, and raise to 84 degrees F. Take through either bichromate or soda lye and wash well. If reddish when dry, take through very weak chloride of lime water.

3898. Sky Blue for Cotton.

For 60 pound of goods, blue vitriol, 5 pounds. Boil a short time, then enter the goods, dip three hours and transfer to a bath of strong lime water. A fine brown color will be imparted to the goods if they are then put through a solution of prussiate of potash.

3899. Crimson for Cotton.

For 10 pounds. Red goods are boiled in clean water. Place them in a bath of 2 pounds of sumach. Let them remain for 12 hours, then place them in a bath of tin salt of 3 degrees B. Allow them to remain for one hour, when they are winched and brought into a bath of $3\frac{1}{4}$ pounds of Brazil wood. Here they remain for several hours, when they are winched and dried.

3900. Common Drab for Cotton.

Work 10 pounds of goods for 15 minutes in a decoction of $\frac{1}{2}$ pound sumach; lift, and add 1 ounce copperas in solution, and work 15 minutes more; wash out in a tub of cold water, and then work 15 minutes in a decoction of 4 ounces fustic, 2 ounces limawood, and 1 ounce logwood; lift, and add 1 ounce alum in solution; work 10 minutes; wring out and dry. A great variety of tints can be produced by varying the proportion of the limawood, fustic and logwood; and lighter or darker shades may be produced by diminishing or increasing the quantities of sumach and copperas.

3901. Dove or Slate Color for Cotton.

Boil a teacup of black tea in an iron pot, adding a teaspoonful of copperas. The depth of color will depend on the quantity of water used. Dye the articles in this and then hang them up to drain, finally rinsing out in soapsuds.

3902. Slate Color for Cotton.

Work the goods for half an hour in a bath with 8 ounces logwood and 1 ounce fustic; lift, and add 1 ounce alum and $\frac{1}{2}$ ounce copperas in solution; work for half an hour; wash and dry. For a bluer tint, use less alum and more copperas; for more purple, use less fustic and more alum, etc.

3903. Gray (Silver) for Cotton.

Boil the goods in clean water and bring them into a wooden vat containing hot water and $8\frac{3}{4}$ ounces of catechu boiled in $3\frac{1}{2}$ quarts of clean water. Work the goods in this bath for half an hour and wring them. Now fill a vat with clean cold water; add to this 2 ounces of green vitriol dissolved in hot water. Work the goods in this until they have acquired the desired color, then rinse and dry.

3904. Green for Cotton.

For 40 pounds of goods, use fustic, 10 pounds; blue vitriol, 10 ounces; soft soap, $2\frac{1}{2}$ quarts, and logwood chips, 1 pound 4 ounces. Soak the logwood over night in a brass vessel, put it on the fire in the morning, adding the other ingredients. When quite hot it is ready for dyeing; enter the goods at once and handle well. Different shades may be obtained by letting part of the goods remain longer in the dye.

3905. Orange for Cotton.

For each pound of goods dissolve 6 ounces of copperas in 3 gallons of water, make the solution as hot as can be handled with the hand; having first dissolved $\frac{1}{2}$ pound bichromate potash in a tub, dip the goods first into one solution then into the other, until the desired shade of color is produced. By washing, the color becomes brighter.

3906. Pink for Cotton.

For 40 pounds of goods use of redwood 20 pounds, muriate of tin $2\frac{1}{2}$ pounds. Boil the redwood in a sufficient quantity of water for one hour, turn off into a large vessel and add the muriate of tin. Put in the goods, let stand a few minutes (5 or 10), and a nice pink will be produced. It is quite a fast color.

3907. Adrianople Red for Cotton.

First cleanse or scour the goods by alkaline baths, after which steep in oily liquors brought to a creamy state by a little carbonate of soda; a bath of sheep's dung is next often used as an intermediate or secondary step; the oleaginous bath, and the operation of removing the superfluous or loosely adhering oil with an alkaline bath, is repeated two or three times, due care

being taken to dry the goods thoroughly after each distinct process; then follow the distinct operations of galling, aluming, madder, and brightening, the last four removing the dun-colored principle, by boiling at an elevated temperature with alkaline liquids and soap; the whole is generally concluded with treatment by spirit of tin. In this way are given the most brilliant red on cottons.

3908. Light Straw Color for Cotton.

To a tub of cold water add 4 ounces acetate of lead in solution, work the goods in this for 15 minutes, and wring out; then work for 10 minutes in another tub of water containing 2 ounces bichromate of potassa; wring out, and work again in the lead solution for 10 minutes; wash and dry.

3909. Tan Color for Cotton.

In a pailful of water boil a pailful of equal parts of sumach, yellow and white oak barks for 1 or 2 hours; steep the goods in this solution for 4 hours, then dip the goods in copperas water and lime water, then into the dye solution again, and again into the copperas and lime water as before, until the desired shade is produced.

3910. Yellow for Cotton.

Sugar of lead $1\frac{1}{4}$ ounces, dissolved in hot water, bichromate of potash 1 ounce, dissolved in cold water. Dip the goods (1 pound) first into the hot lead water, then wring out and dip into the cold bichromate water, alternating from one to the other, wringing each time, until the color suits.

3911. Yellow for Cotton.

Dissolve 1 ounce of sugar of lead and $\frac{1}{2}$ ounce of alum in warm water; place 1 pound of material in this bath, work it for some time, and finish the dyeing process in a solution of chromate of potash.

3912. Yellow for Cotton.

For 3 pounds of goods, dissolve in 6 quarts of soft water, 6 ounces of sugar of lead; dissolve 3 ounces of bichromate of potash in another vessel and dip the goods, 1 piece at a time, into the sugar of lead, and then into the bichromate; dry and rinse, and it is done.

Cotton cloth is prepared for dyeing by first steeping it over night in an alkaline lye, which loosens and removes the oil, grease, and dressing which it has obtained in weaving; it is then thoroughly rinsed in clean water. If the cloth is to be dyed a dark color, no further preparation is needed; but if a light shade is desired, the fabric must be bleached.

DYES FOR MIXED GOODS.**3913. Cheap Black for Mixed Cotton and Wool.**

Boil in a bath of logwood extract, 25 per cent.; fustic extract, 4 per cent.; soda, 13 per cent.; bluestone, 8 per cent. Work at 120 degrees F. for some minutes, then raise to boiling, until a good black is obtained, after which enter in a new bath containing bichromate of potash, 4 per cent.

3914. Black for Mixed Goods.

Black on common mixed carpet yarn for filling, 100 pounds goods or yarn—Prepare 25 pounds extract of logwood, 8 pounds blue vitriol, 8 pounds sal soda. Boil up, enter goods, give 3 turns slowly, take up, and wash.

(Note)—1. The second 100 pounds requires only 15 pounds extract of logwood, 6 pounds blue vitriol, and 6 pounds sal soda. 2. The third 100 pounds requires only 10 pounds extract of logwood, 4 pounds blue vitriol, and 4 pounds sal soda, and keep it for future use. 3. This is a fair black, and size may be worked with it.

3915. Blue for Mixed Goods.

Give the goods a mordant of alum, or of acetate of aluminum ("red liquor"), rinse them well, and boil in a bath of logwood, to which a small quantity of blue vitriol has been added; lastly rinse and dry.

3916. Blue for Mixed Goods.

Boil the goods for a short time in a bath of logwood; then add to the solution, tartar and verdigris, in the proportion of 1 ounce of each to every pound of logwood employed; and again boil for a short time.

3917. Blue for Mixed Goods.

Give the goods a mordant of tartar; lift, add a little chromate of potash; again work for 15 or 20 minutes, and rinse; next boil in a bath of logwood, adding towards the last a few grains more of the chromate; again boil and finish. The whole quantity of chromate used should not exceed $\frac{1}{4}$ ounce to each pound of logwood taken for the bath. Very dark.

3918. Blue for Mixed Goods.

For 3 pounds of goods dissolve 3 ounces of copperas in sufficient water to cover the goods and boil the goods therein, using an iron kettle (not a brass kettle). Dissolve 2 ounces prussiate of potash in sufficient water and add to it after the prussiate is dissolved, 1 ounce sulphuric acid; dip the goods in this solution, also repeating if necessary. A green may be made from this color by dipping a yellow in it.

3919. Garnet for Half Woolens.

Boil for half an hour with water containing $6\frac{1}{4}$ ounces bichromate of potash. $4\frac{1}{4}$ ounces oil of vitriol and 2 ounces blue vitriol. Rinse and enter in a water at 122 degrees F., containing magenta $1\frac{3}{8}$ ounces, and methyl violet $\frac{1}{4}$ ounce. Heat to a boil, lift, wash, and rinse.

3920. Gray for Half Woolen Goods.

For 11 pounds of goods. Prepare for 3 hours with 2 pounds 12 ounces sumac, wring out and boil for three-quarters of an hour with $4\frac{1}{2}$ ounces logwood and 1 ounce fustic. Sadden in the same beck with $1\frac{3}{4}$ ounces copperas at 200 degrees F.

3921. Green Fustic for Mixed Goods.

For 50 pounds of goods, 50 pounds fustic with 11 pounds of alum; soak in water until the color is extracted, put in the goods until of a good yellow color, remove the chips, and add extract of indigo in small quantities at a time, or until the color produced is satisfactory.

3922. Aniline Red for Mixed Goods.

Aniline red produces a color varying from the deepest crimson to a very brilliant and beautiful rose pink, according to the strength of the dye. Enclose the aniline in a small muslin bag, and, having a kettle (tin or brass) filled with moderately hot water, place the bag in the water, taking care to rub it upon the bottom and sides of the kettle until the color is extracted through the cloth. Then immerse the articles to be colored, and in a short time they are done. The dye is so readily absorbed that care is required to prevent spotting. No mordant is required, although it improves the color to wring the goods out of strong soapsuds before putting them in the dye. It is a permanent color for woolen or silk.

3923. Red for Half Woolens.

For 11 pounds of goods.—Boil for an hour with 17 ounces white argol and the same weight of argol. Dye at a boil for 15 minutes with 4 pounds 14 ounces peachwood and $2\frac{3}{4}$ pounds fustic. Rinse, steep for fifteen minutes in the decoction of 2 pounds 3 ounces fustic, and work for the same length of time in red cotton spirits at 4 degrees Tw. Let drain and cotton dye to shade in the cold decoction of 17 ounces peachwood and the same weight of fustic.

3924. Scarlet for Worsted or Wool.

Three gallons water, 2 ounces dry cochineal, 1 ounce cream of tartar, 1 wine-glassful nitrate of tin; boil the goods one hour. To give the goods a yellower hue, add a little young fustic to the above mixture. Wash out as before.

DYES FOR LINEN.

3925. Prussian Blue for Linen.

For 50 pounds of goods.—Add to a water slightly warm, 3 pounds nitrate of iron and 2 pounds tin crystals. Enter and give five turns, pass into a fresh water made up with a solution of 2 pounds yellow prussiate and 1 pound sulphuric acid. Lift, drain, and re-enter in the iron bath. If not dark enough, take again through the prussiate. Lift, rinse and dry.

3926. Catechu Fast Brown for Linen.

For 50 pounds of goods.—Steep the goods over night in a decoction of 10 pounds cutch or gambier. Lift, work in a hot solution of bichromate of potash, lift, rinse and dry.

3927. Greenish Gray for Linen.

For 22 pounds of goods.—Dissolve 17 ounces soda ash in water, and boil for an hour. Wash, and take through a fresh water with 17 ounces sulphuric acid, and wash again. Stir up 2 pounds 3 ounces of the best chloride of lime to a uniform paste, and allow to settle. Soak the goods in the clear liquid for six hours, turning occasionally. Lift, and take through a fresh water to which 35 ounces muriatic acid have been added. Rinse well. Boil out $8\frac{1}{4}$ ounces sumac and 35 ounces bark in sufficient water. Enter the goods for an hour in the clear liquid at 122 degrees F., press, and pass into a fresh water with $8\frac{1}{4}$ ounces copperas. Work here for fifteen minutes, and take through water. Make up a water at 122 degrees F. with 35 ounces alum; enter the goods, and add by degrees very small quantities solution of bark and extract of indigo till the desired shade is obtained. Rinse and dry.

3928. Iron Gray for Linen.

For 11 pounds of goods.—Work for an hour in a boiling water with 35 ounces sumac. Wring, and work for another hour in a fresh water with the same weight of copperas.

3929. Light Green for Linen.

For 10 pounds of goods.—Digest for six hours with $6\frac{1}{2}$ pounds sumac. Wring out and enter for half an hour in the following mordant: Alum, 500 grains; sugar of lead, 250 grains. Wring out and dye with 100 grains iodine green.

The properties of linen, as regards its behavior with mordants and dye wares, do not differ essentially from those of cotton. It is, however, less able to resist strong acids and chemicals. The proportion of linen goods dyed is but small in comparison with those sold in the white state.

DYES FOR SILK.

3930. Black for Silk.

For 100 pounds of silk.—Boil 22 pounds of bruised Aleppo galls for 2 hours in 90 to 100 gallons of water, adding boiling water from time to time to compensate for that lost by evaporation. To the clear bath add 32 pounds of copperas, 7 pounds of iron filings, and 21 pounds of dextrin; digest, with agitation, for 1 hour, and when the ingredients are dissolved, pass the silk (previously prepared, "galled" with one-third of its weight of gall-nuts) through the bath for about an hour; then rinse and air it well; next leave it in the dye bath for 6 to 12 hours; this immersion or steep may be repeated if necessary.

3931. Black for Silk.

For 5 pounds of silk. For the mordant use $\frac{1}{2}$ pound of copperas; rinse and air; for the "dye bath" a decoction of 4 pounds logwood to which $\frac{1}{2}$ pint of stale urine has been added; after lifting the goods, add 2 ounces more of copperas to the bath, and work for 15 minutes as before. By adding 2 ounces of dyer's nitrate of iron to the mordant the same ingredients will give a deep black; and by substituting a little white soap for the urine, and omitting the addition of copperas to the logwood bath, it will give it a blue black. The last may also be produced by first dyeing the goods deep blue as with prussiate, and omitting the urine and soap, in which case only half of the logwood will be required.

3932. Black for Silk.

A bath of nutgalls is given for 12 to 36 hours, occasionally working the goods therein; they are next taken out, rinsed, and well aired, after which they are passed for a few minutes through a bath containing sulphate of iron, and are then again drained, rinsed and aired. The steep in the nutgall bath may be repeated if necessary, followed, as before, by the iron bath previously replenished with a little fresh copperas. The whole quantity of galls to be taken for 1 pound of silk varies with their quality from $\frac{1}{2}$ to $\frac{3}{4}$ pound, that of the copperas (for the first bath), from 3 to 4 ounces.

3933. Black for Silk.

Let the material remain in a mordant solution of nitrate of iron of 40 degrees B. for $\frac{1}{2}$ hour; then rinse and dye it in a decoction of $3\frac{1}{4}$ pounds of logwood and 1 pound of fustic. Let it remain in the dye bath for $\frac{1}{2}$ hour.

3934. Blue (Raymond's) for Silk.

Mordant with solution of nitrate of iron of 1 degree to 2 degrees B., rinse the material, place it in a hot soap bath, and rinse again; then it is dyed with prussiate of potash and sulphuric acid. It is then rinsed, brightened in cold water containing some spirit of sal ammoniac, and finally rinsed.

3935. Brown for Silk.

Dissolve annatto, 1 pound; pearlash, 4 pounds; in boiling water, and pass the silk through it for two hours; take out, squeeze well and dry; next give it a mordant of alum, pass through a bath of Brazil wood, and afterwards through a bath of logwood, to which a little copperas has been added. Wring out and dry, and afterwards rinse well.

3936. Fast Brown for Silk.

Mordant in a mixture of 3 parts of acetate of alumina and 2 of acetate of iron, each 5 degrees B. Then rinse and dry the material and dye with madder.

3937. Ruby and Maroon for Silk.

Take 1 pound cudbear, and boil in a bag for 15 minutes; and work the silk in this for $\frac{1}{2}$ hour.

For a bluish tint, lift, and add 3 ounces liquid ammonia; work 10 minutes, wring and dry.

3938. Yellow for Silk.

For one pound of silk: Alum, 3 ounces; sugar of lead, $\frac{3}{4}$ ounce; immerse the goods in the solution over night; take out, drain, and make a new dye with fustic, 1 pound; dip until the required color is obtained.

DYES FOR IVORY, BONE, ETC.

3939. Black Ivory.

Ivory is readily and nicely dyed black by first boiling it in a strained logwood decoction, and then immersing it and allowing it to remain for a short period in a solution of sulphate or acetate of iron.

3940. Black Dye for Ivory.

Wash the Ivory well in alkaline solution, then steep in weak neutral solution of silver nitrate; drain, and expose to light.

3941. Blue for Ivory.

Steep in a weak solution of sulphate of indigo, which has been nearly neutralized with salts of tartar, or in a solution of soluble Prussian blue.

3942. Green for Ivory.

Dissolve verdigris in vinegar, and steep therein for a short time in a glass vessel.

3943. Purple for Ivory.

Steep in a weak neutral solution of chloride of gold, and expose to the light.

3944. Red for Ivory.

Immerse in an infusion of cochineal in ammonia, having previously soaked it for a short time in water slightly acidulated with nitric acid.

3945. Yellow for Ivory.

Steep the Ivory for some hours in a solution of sugar of lead, then, when dry, put it into a solution of chromate of potassium.

3946. Yellow for Ivory.

Dissolve as much orpiment (best) in solution of ammonia as it will take up; steep the Ivory in the solution for some hours, then dry in a warm place.

3947. To Color Billiard Balls Red.

Place the balls in a solution of chloride of tin for a little while, and then dip them in a hot solution of cochineal or Brazil wood, rinsing well with cold water immediately. If left in the hot solution, they are apt to crack on the surface.

3948. To Color Billiard Balls.

Immerse the balls to be colored in diluted nitric acid (1 to 32) for 10 to 20 minutes, then for the same length of time in a solution of stannous chloride (zinc chloride, 1 to 200), and finally boil in a solution of carmine (1 to 200), to which a little ammonia has been added. When dry and cold, rub with a little boiled linseed oil to polish. This gives a crimson color; for blue, use Prussian blue instead of carmine; and for yellow, either turmeric or safflower; for brown, use a mordant of acetates of aluminum and iron, and dye with madder or fustic.

3949. Staining Bone.

To color bone red, boil in vinegar in which cochineal has been macerated for several days, taking care to keep every part of the article covered with the liquid. A fine deep purple red is gotten by immersing in ammoniacal carmine solution for a sufficient length of time. If a very deep color is desired, immerse the article, previously to boiling as above, in a very dilute solution of potassium hydrate for a few moments. Yellow is obtained by first immersing the article for several hours in plain vinegar or an alum solution, and afterwards in a decoction of saffron or barberry, to which a small portion of alum has been added. A green stain is made by

dissolving 3 parts verdigris and 1 part sal ammoniac in vinegar. Blue is the result of alternate immersions in the green bath and in one of potassium hydrate. Black is the result of a bath first in a decoction of logwood and afterward in a solution of acetate of iron. These processes can be used for staining ivory.

3950. Black Dye for Straw.

Logwood chips..... 20 ounces.
Bruised gall..... 5 ounces.
Turmeric or fustic..... 10 drams.
Water, sufficient.

Boil the hats for two hours in the solution, with frequent stirring; remove them from the liquid, allow to drain a short time, and steep in a solution of black liquor—crude acetate of iron—of 4 or 5 degrees B. Lastly, rinse in an abundance of water, and dry.

3951. Easter Dyes.

To obtain a red color, boil the eggs in a decoction of Brazil wood. In the same manner Persian berries produce a yellow, turmeric a brown, and logwood a deep claret color. By adding chromate of potassa to logwood, a black is obtained. To dye blue, make the following solution:

Boiling water..... 2 pints.
Sulphate of iron (crystals) 75 grains.
Indigo, in powder..... 45 grains.
Dry slaked lime..... 2½ drams.

Mix together and stir every half hour for three or four hours; cover, and allow to settle for about 12 hours. Decant the clear liquid and dip into it the eggs, already boiled, but still warm. The blue color appears on exposure to the air. Green is produced by the successive application of blue and yellow. Various shades of purple, violet, etc., are obtained from red and blue. A simple method for imparting variegated colors is to wrap the eggs in pieces of printed muslin, and to boil them thus in water; sometimes very pretty patterns are

in that manner printed on the shell of the eggs.

Aniline dyes are largely used, and are desirable because they do not need any substance to set them, this being accomplished by the albuminous portions of the shell. In your purchases, select the following grades, which are said to be free from arsenic: Fuchsine, cryst. N; eosine T; eosine B; violet, red shade; violet, blue shade; blue, pure; blue, peacock shade; Emerald green; Auramin yellow; orange O I; brown T; silver gray.

3952. Gray Dye for Straw.

Only very white straws can be dyed this shade. First, steep the hats in a very weak solution of caustic soda, to remove all traces of the sulphur used for bleaching the straw. Then take of:

Alum 20 ounces.
Tartaric acid..... 1 ounce.
Water, sufficient.

Dissolve the alum and the acid, and to the solution add enough ammoniacal cochineal and indigo paste to obtain the desired color. The shade of the gray will incline to the reddish or to the bluish, according to the reddish or to the bluish, according coloring material. A little sulphuric acid may be added if necessary to neutralize the alkalinity of the cochineal. Boil the hats in the mixture for about an hour, and rinse in water slightly acidified with muriatic acid.

3953. Maroon Dye for Straw.

Ground saunders..... 8 ounces.
Ground turmeric..... 12 ounces.
Bruised galls..... 2 ounces.
Rasped logwood..... 8 ounces.
Water, sufficient.

Boil in a kettle of such size as to allow ample room for stirring the hats without bruising them. After two or three hours, remove them, rinse them, and steep over night in black liquor of 3 degrees B. Rinse in several waters, and dry in the shade.



PART VII.

Technical Formulas, Industrial Processes, etc.

CEMENTS, GLUES, MUCIL- AGES, PASTES, ETC.

3954. Iron Cement to Withstand Heat.

Sixty-two parts cast iron filings, 32 parts gun metal or copper filings, and 6 parts of a 4 per cent solution of glacial acetic acid, with sufficient water to render the mixture moist.

3955. Cement for Steam Pipes.

White lead, mixed, 2 parts; red lead, dry, 1 part; grind or otherwise mix them to a consistency of thin putty; applying interposed layers with one or two thicknesses of canvas or gauze wire, as the necessity of the case may be.

3956. Cement for Steam Pipes.

If 2 parts litharge are mixed with 1 part dry slaked lime and 1 part fine sand, well rubbed together, and mixed with such a quantity of hot linseed oil varnish as to form a pasty mass, an excellent cement for iron steam-pipes is obtained, which soon sets hard. Consequently it must be prepared every time, and applied when still hot.

3957. Cement for Parchment Paper.

The best cement for pasting parchment paper, according to lithographic authority, is casein glue. It is much better than so-called chrome glue, because the latter produces yellow or brownish spots where it has been employed. Casein glue is a solution of casein, which appears as a clabber when milk is allowed to curdle. The glue is dissolved in a saturated solution of borax. When dried in the form of transparent gelatin it appears as a grayish-white and somewhat brittle matter, which can be easily dissolved in water, and possesses great adhesiveness. When employed for pasting parchment paper a thin paste is

prepared, used in the customary manner, and the jointed places afterwards exposed for a little while to a jet of steam.

3958. For Cementing Iron.

Equal parts of sulphur and white lead, with about one-sixth proportion of borax, are thoroughly incorporated to form one homogeneous mass. When the composition is to be applied it is to be wetted with strong sulphuric acid, and a thin layer of it should be placed between the two pieces of iron to be connected, these being at once pressed together. This cement will hold so firmly as to resist the blows of a steam hammer, and dry so completely in a few days as to leave no trace of the cement, the work then presenting the appearance of a welding.

3959. Cement for Knife Handles.

One pound of colophony and 8 ounces of sulphur are melted together, and either kept in bars or reduced to powder. One part of this powder is mixed with $\frac{1}{2}$ part of iron filings, fine sand, or brick dust, and the cavity of the handle filled with this mixture. The stem of the knife is then inserted into the cavity, and when cold will be found fixed to its place with great tenacity.

3960. Elastic Cement.

Caoutchouc (in small pieces), 1 part; chloroform, 3 parts; dissolve.

3961. Elastic Cement.

Caoutchouc, 5 parts; chloroform, 3 parts; dissolve, and add gum mastic (powdered), 1 part. Elastic and transparent.

3962. Elastic Cement.

Gutta percha, 3 parts; caoutchouc, 1 part (both cut small); bisulphide of carbon, 8 parts; mix in a close vessel and dissolve by the aid of a water-bath. This is to be gently warmed before it is applied.

3963. Elastic Cement.

Gutta percha, 1 pound; caoutchouc, 4 ounces; pitch, 2 ounces; shellac, 1 ounce; linseed oil, 2 ounces; melted together. This must be melted before being applied.

3964. Cement for Ivory.

Moisten thoroughly a small quantity of very finely powdered quicklime with white of egg to form a paste. Use at once, clamp parts firmly together and leave for 24 hours. Use as little cement as possible.

3965. Cement for Mending Coal Oil Lamps.

Caustic soda.....	1 dram.
Rosin	3 drams.
Water	5 drams.
Plaster Paris.....	4 drams.

Boil the soda, rosin and water together until homogeneous, then add the plaster. It is then ready for use. It will set in about thirty minutes, is not affected by the oil and but slightly by water.

3966. Cement for Leather.

To 10 parts bisulphide carbon and 1 part spirits turpentine add enough gutta percha to make a tough, thickly-flowing liquid. The surfaces to be joined must be perfectly free from grease, which is accomplished by laying a cloth upon them and applying a hot iron for a time. The coat is applied to both surfaces, and pressure made till the joints are dry.

3967. Cement for Leather and Cloth.

An adhesive material for uniting the parts of boots and shoes, and for the seams of articles of clothing, may be made as follows:

Gutta-percha	1 pound.
India rubber.....	4 ounces.
Pitch	2 ounces.
Shellac	1 ounce.
Linseed oil.....	2 ounces.

The ingredients are to be melted together and used hot.

3968. Cement for Paper, Leather, Cloth, etc.

Dissolve 5 parts of borax in 95 parts of water and add casein, to syrupy consistence.

3969. To Cement Leather to Metal.

Digest 1 part crushed nutgalls with 8 parts distilled water for six hours, and strain; macerate glue with its own weight of water for 24 hours, and dissolve; spread the warm infusion of the galls on the leather and the glue on the roughened metallic surface; apply the prepared surfaces together and dry gently; the leather then adheres so so firmly to the metal that it cannot be removed without tearing.

3970. Cement for Leather Straps, or to Fix Leather to Wood or Metal.

Gutta percha, 20 parts. Dissolve in a mixture of carbon bisulphide, 50 parts, oil of turpentine, 10 parts, and add powdered Syrian asphaltum, 20 parts. After standing a few days, the mixture becomes homogeneous. If too thin, it may be evaporated until, when cold, of the consistence of honey. The leather to which this cement is to be applied must be first cleansed from grease with benzine.

3971. Cement for Leather, Rubber, Etc.

Bisulphide carbon.....	8 ounces.
Gutta-percha	½ ounce.
Resin	40 grains.

3972. Cement for Leather, Belting, Etc.

Soak 2 pounds of best carpenter's glue in 3 pounds of water, dissolve by the aid of heat and keep on heating until the solution has acquired the consistency of syrup. Then add ¾ ounces of Venice turpentine and about 80 minims of liquefied carbolic acid. On cooling, this cement congeals to a gelatinous mass, which is to be cut into thin slices and spread upon tin plates to dry, which requires about 2 days. When used, the cement is melted with the addition of a little vinegar and applied with a brush to the freshly cut and tapered ends of the leather, and the joint pressed between warm iron plates for a quarter of an hour.

3973. Cement for Leather Driving Bands and Pulleys.

Soak 100 parts of good glue in cold water for 10 hours, press off the surplus water, and place in a water-bath over a moderate fire to melt. To the melted glue add 2 parts of anhydrous glycerine and 3 parts of red chromate of potassium. Let the fire be increased until the mixture comes to a boil for a moment. Use at once, and as hot as convenient. The potassium chromate should not be added until just before using. The surfaces of the leather should be freshened with a clean file or rasp before applying the cement, and the latter should be smeared upon both surfaces to be joined. As soon as brought together, the joint should be placed between 2 flat pieces of board, and either heavily weighted or put into a vice and screwed up tightly. The joint will be complete in from 24 to 30 hours.

3974. Cements of Gutta-Percha and India Rubber.

The number of rubber cements in use all over the world is something remarkable.

Almost all of them have as the base either gutta-percha or India rubber, and some cheap solvent. In making a cement, one should know pretty thoroughly what is to be expected of it. For instance, an ordinary rubber cement will hold on a host of different surfaces and with the best of success, except where there is continued dampness. For holding to damp walls, or surfaces where there is a constant presence of moisture, there is nothing equal to marine glue, which consists of India rubber, 1 part; asphaltum, 2 parts; coal tar, 12 parts.

The rubber, after having been massed, is dissolved in the undistilled coal tar, and the asphaltum is then added. This glue, as its name indicates, is oftentimes used for mending articles at sea, or patches, for instance, that are to be laid on surfaces that are to be under water, and it has been found to be a most excellent thing. Of glass cements there are a great many, the rubber as a rule being dissolved in some very volatile solvent, and some hard, drying gum is added.

A gutta-percha cement for leather is obtained by mixing the following. It is used hot: Gutta-percha, 100 parts; black pitch or asphaltum, 100 parts; oil of turpentine, 15 parts. An elastic gutta-percha cement is especially useful for attaching the soles of boots and shoes, as on account of its great elasticity it is not liable to break or crack when bent. To make it adhere tightly, the surface of the leather is slightly roughened. It is prepared as follows: By dissolving 10 parts of gutta-percha in 100 parts of benzine. The clear solution from this is then poured into another bottle containing 100 parts of linseed oil varnish, and well shaken together.

3975. Davy's Universal Cement.

Is made by melting 4 parts of common pitch with 4 parts gutta-percha in an iron vessel, and mixing well. It must be kept fluid, under water, or in a dry, hard state.

3976. Leather and Rubber Cement.

A very adhesive cement, especially adapted for leather driving belts, is made by taking bisulphide of carbon, 10 parts; oil of turpentine, 1 part; and dissolving in this sufficient gutta-percha to form a paste. The manner of using this cement is to remove any grease that may be present in the leather, by placing on the leather a piece of rag and then rubbing it over with a hot iron. The rag thus absorbs the grease, and the two pieces are then roughened and the cement lightly spread on. They are then joined, and subjected till dry to a slight pressure.

3977. Leather and Rubber Cement.

A solution of gutta-percha for shoemakers is made by taking pieces of waste gutta-percha, first prepared by soaking in boiling water till soft. It is then cut into small pieces and placed in a vessel and covered with coal tar oil. It is then tightly corked to prevent evaporation, and allowed to stand for 24 hours. It is then melted by standing in hot water till perfectly fluid, and well stirred. Before using, it must be warmed as before by standing in hot water.

3978. Leather and Rubber Cement.

A cement for uniting India rubber is composed as follows: 100 parts of finely chopped rubber, 15 parts of resin, 10 parts of shellac; these are dissolved in bisulphide of carbon.

3979. Leather and Rubber Cement.

Fifteen grains of India rubber, 2 ounces of chloroform, 4 drams of mastic. First mix the India rubber and chloroform together, and when dissolved the mastic is added in powder. It is then allowed to stand by for a week or two before using.

3980. An Elastic Cement.

Mix together and allow to dissolve the following: 4 ounces of bisulphide of carbon, 1 ounce of fine India rubber; 2 drams of isinglass, $\frac{1}{2}$ ounce of gutta-percha. This cement is used for cementing leather and rubber, and when to be used the leather is roughened and a thin coat of the cement is applied. It is allowed to completely dry, then the two surfaces to be joined are warmed and then placed together and allowed to dry.

3981. Cement Used for Repairing Holes in Rubber Boots and Shoes.

(a) Caoutchouc, 10 parts; chloroform, 280 parts. This is simply prepared by allowing the caoutchouc to dissolve in the chloroform. (b) Caoutchouc, 10 parts; resin, 4 parts; gum turpentine, 40 parts. For this solution the caoutchouc is shaved into small pieces and melted up with the resin, the turpentine is then added, and all is then dissolved in the oil of turpentine, the two solutions are then mixed together to repair the shoe with this cement. First wash the hole over with it; then a piece of linen dipped in it is placed over it; as soon as the linen adheres to the sole the cement is then applied as thickly as required.

3982. Cement for Bicycle Tires.

To a melted mixture of one part each of shellac and gutta-percha add, stirring constantly, one-tenth part each of red lead and melted sulphur. Use hot.

3983. Cement for Bicycle Tires.

Melt together 2 parts pitch and 1 part gutta-percha. Use hot.

3984. Cement for Bicycle Tires.

For cuts and cracks in the tire: In 10 ounces carbon bisulphide dissolve 20 ounces caoutchouc and 10 ounces gutta-percha, add 5 ounces fish glue. Bind the tire with cord until the cement has well set.

3985. Bicycle Tire Cement.

In a wide-mouthed bottle place one part of powdered shellac and ten parts ammonia (specific gravity .888) and allow the mixture to stand three or four weeks. At first gelatinization results, but eventually the mixture becomes syrupy and is said to answer very satisfactorily.

3986. Bicycle Tire Cement.

Melt together by gentle heat two parts of asphalt and one part of gutta-percha. This mixture is to be used hot, the wheels if possible being warmed. It is said to resemble that sold by bicycle dealers.

3987. Bicycle Tire Cement.

To a melted mixture of one part each of shellac and gutta-percha add, stirring constantly, one-tenth part each of red lead and melted sulphur. Use hot.

3988. Cement for Glass.

Dissolve caseine in a cold saturated solution of borax. Paste with this solution strips of bladder, previously softened with water, on the cracks, and dry at a gentle heat. If the vessel is to be heated, coat the bladder on the outside just before it is dry, with a concentrated solution of soda and quicklime, or plaster of paris.

3989. Cement for Glass Retorts.

Iron filings 13¼ pounds.
Cement 2¼ pounds.
Plaster of paris..... 1 pound.
Sal ammoniac 2½ ounces.
Powdered sulphur 1¾ ounces.
Vinegar 1¾ pints.

Stir the mass into a paste with water. The cemented articles must not be exposed to moisture.

3990. To Fasten Glass to Brass.

Another cement, and one which is water proof, consists of a pasty mixture of 13 parts of fresh beaten blood, 4 parts slaked lime and a little alum. This should be used immediately and applied with a brush. One or two coats will render any cloth water proof.

3991. To Fasten Glass to Brass.

Use a cement made by melting together 5 ounces of resin and 1 ounce of beeswax, into which stir thoroughly 1 ounce of red ochre or Venetian red. Continue stirring until the mass is cold. It may be used as is scaling wax.

3992. Cement for Glass Label.

Resin 1 part.
Yellow wax 2 parts.

3993. Cement for Glass Label.

Beeswax is an excellent material for attaching glass labels either to bottles or to wood surfaces. Melt the wax, warm the label, and also, when practicable, the surface to which it is to be applied, coat the label with the wax, place it on the surface, and press the label gently into place, with sufficient force to expel any great excess of wax. When quite cold this excess is scraped off, and the surface can then be made perfectly clean by rubbing with a rag moistened with turpentine. White wax may be used instead of yellow; while scarcely as tenacious, it is quite enough so to answer, and presents a better appearance when the back of the label happens to be seen. A small proportion of resin is sometimes added, but the cement is better without it, unless it is exposed to a tropical temperature.

3994. To Fasten Metal Letters on Glass or Other Polished Surfaces.

Copal varnish 15 parts.
Linseed oil varnish..... 5 parts.
Raw turpentine 3 parts.
Oil of turpentine..... 2 parts.
Carpenter's glue, dissolved
in water 5 parts.
Precipitated chalk 10 parts.

3995. Cement for Mending Pestles.

Equal quantities of gutta-percha and shellac are melted together and well stirred. This is best done in an iron capsule placed on a sand-bath and heated either over a gas furnace or on the top of a stove. It is a combination possessing both hardness and toughness, qualities that make it particularly desirable in mending mortars and pestles. When this cement is used, the articles to be cemented should be warmed to about the melting point of the mixture and retained in proper position until cool, when they are ready for use.

3996. To Mend a Broken Mortar.

Place the mortar in an oven and heat thoroughly; mix some shellac with a little alcohol and warm until melted, and smear the hot paste on the hot fractured surface, bind up firmly and allow to cool.

3997. Cement for Pestle Handles.

A stiff paste made of litharge and glycerine. A little of this should be poured into the cavity and also applied to the handle, and the latter should be screwed close down, so that all danger of contaminating material from the mortar may be avoided.

3998. Transparent Cement for Porcelain.

The glues generally employed are inconvenient, as they cause yellowish stains. The following method gives an absolutely colorless glue: Mix in a hermetically sealed flask 60 grains of chloroform and 75 grams of rubber cut in very small pieces. After the rubber is dissolved, and when the liquid is completely fluid, add 15 grams of mastic. Let the solution remain for 8 hours, until all the mastic is dissolved. The glue so prepared is used as usual.

3999. To Cement Metal to Glass or Poreelain.

Boil together 2 ounces of thick glue solution with 1 ounce of linseed oil varnish, until as perfect a mixture as possible has been effected. The pieces cemented should remain fastened together for two or three days.

4000. Cement for Porcelain Letters.

Boiled linseed oil..... 3 ounces.
Litharge 2 ounces.
White lead..... 1 ounce.
Gum copal..... 1 ounce.

Free the surface from grease before applying.

4001. Cement for Porcelain.

White lead..... 20 grams.
Pipe clay..... 12 grams.
Mix them with:

Boiled linseed oil..... 10 grams.
Heat on a water-bath. The articles cemented are slowly dried in a warm place.

4002. Cement for Glass and Porecelain.

Melt together:

Sulphur 6 parts.
White Burgundy pitch..... 4 parts.
Shellac 1 part.
Elemi 2 parts.
Mastic 2 parts.
Powdered kaolin, passed
through a very fine sieve... 6 parts.

Before applying, the surface to be joined must be carefully heated.

4003. Cement for Plaster Casts.

Dissolve small pieces of celluloid in ether. Decant the liquid after a short while. The pasty residue is a cement that will dry rapidly and not dissolve in water if the articles should be exposed to it.

4004. Cement for Plaster Casts.

Stir to a thick batter with silicate of soda, 12 parts Portland cement, 6 parts slaked lime, 6 parts fine lead, 1 part infusorial earth. Very excellent for marble and alabaster. The cemented object need not be heated. After 24 hours the fracture is firm, and the place can with difficulty be found.

4005. Cement for Marble.

Melt together 8 parts of resin and 1 part of wax; when melted, stir in 4 or 5 parts of plaster of Paris. The pieces to be joined should be made hot.

4006. Cement for Marble.

Procure a small piece of quick lime fresh from a newly-burnt kiln, slake with white of egg, wash the fractured parts quite clean, and apply.

4007. Cement for Marble.

Soak plaster of Paris in a saturated solution of alum, bake it in an oven, reduce it to powder, mix with water and apply. It sets like granite.

4008. Cement for Marble Counter Tops.

Mix finely-sifted plaster of Paris in a strong solution of shellae in alcohol. Apply immediately, pressing the edges of the broken pieces together as closely and quickly as possible.

4009. Cement for Meerschaum.

Curdle a little skim milk with acetic acid, separate the albumen and dry quickly. When dry, triturate to a very fine powder, add to it one-tenth of its weight of dry quicklime, and to every 100 parts of mixture add 1 of camphor. Triturate well together and keep in a well-corked bottle. When used, it should be made into a paste with water and applied quickly. The joined pieces should rest in a warm place unmoved for 24 hours to allow the cement to set thoroughly. If the parts to be joined are colored, the joint can be made almost invisible by first bringing the cement powder before wetting it to the desired shade.

4010. Cement for Meerschaum.

Casein 100 parts.
Calcined magnesia 5 parts.
Silicate of sodium, syrupy, sufficient quantity.

4011. Cement for Aquarium.

Gutta-percha, in shreds.... 4 ounces.
Black pitch 8 ounces.
Shellae 2 drams.

Melt in an iron ladle on a sand bath and stir together. Pour out on a wet slab and roll into sticks.

4012. Cement for Aquarium.

Litharge 20 parts.
 White sand, finest..... 20 parts.
 Plaster of paris..... 20 parts.
 Borate of manganese..... 1 part.
 Resin, powdered 70 parts.
 Boiled linseed oil, sufficient quantity.

Mix the solids and make them into a paste with the oil.

4013. Cement for Aquarium.

Take equal parts of flowers of sulphur, powdered sal ammoniac, and iron filings, and mix thoroughly with good boiled linseed oil. Finally, add a sufficient quantity of pure white lead to form a semi-liquid about the consistency of thick molasses.

4014. To Make Portland Cement Frost Proof.

Portland cement, 1 part; lime, 1 part; sand (clear river), 3 parts; caustic soda, 1 part dissolved in 3 parts of water.

4015. Serviceable Mortar.

One bushel unslaked lime, three bushels sharp sand; mix one pound of alum with one pint of linseed oil, and thoroughly mix this with the mortar when using it and use hot. The alum will counteract the action of the frost.

4016. To Make Cisterns and Tanks Water Tight.

Paint thickly on the inside with a mixture of eight parts of melted glue and four parts of linseed oil boiled with litharge. In forty-eight hours it will be so hard that the tank can be filled with water.

4017. Cement for Floors.

Mix 6 parts of plaster of paris with 1 of lime; wet, slake, and lay the floor. Then go over it after it is dry with a solution of copperas. This is repeated several times. The surface must be perfectly dry before each application. Finally, after some days' drying, brown with boiled linseed oil and finally varnish with copal varnish. The floor may have to be laid in sections on account of the expansion on setting. The iron oxide turns brown on exposure to the air.

4018. Cement, Electrical.

Black resin, 7 pounds; red ocher, 1 pound; plaster of Paris, $\frac{1}{2}$ pound (both well dried and still warm); melted together, and the heat and agitation continued until all frothing ceases, and the liquid runs smooth; the vessel is then withdrawn from the fire, and the mixture stirred until cooled sufficiently. Used to cement the plates in galvanic troughs, join chemical vessels, etc.

4019. Cement for Celluloid Goods.

Gum shellac 1 ounce.
 Camphor 1 ounce.
 Alcohol 4 ounces.
 Dissolve and filter.

4020. Cement for Celluloid Goods.

Celluloid scraps 1 ounce.
 Alcohol 2 ounces.
 Macerate the scraps, finely divided, in the alcohol, and, when they are dissolved, filter.

4021. Cement for Insulating Tapes.

Dissolve pure gum rubber in turpentine, and add 5 per cent of raw linseed oil.

4022. Cement for Insulating Tapes.

Yellow pitch 8 parts.
 Beeswax 2 parts.
 Tallow 1 part.

4023. Cement for Emery Wheels.

There are two processes for making this compound. The first is to use a mixture of equal parts of isinglass and glue made into a moderately thick paste by means of hot water. The second is as follows: Coarse emery powder is mixed with about half its weight of pulverized Stourbridge loam, and enough water to make a thick paste; this is pressed into a metallic mould, and, after having thoroughly dried, is baked in a muffle at a temperature considerably above a red-heat, and below the full white-heat. In this case the alumina of the loam serves as a bond, and unites the particles very completely into a solid artificial emery stone, which cuts "greedily," and yet is said to hardly suffer perceptible wear. This, like the first, is not affected by water.

4024. Cement for Retorts, etc.

Clay, powdered and sifted.. 60 parts.
 Rye flour..... 30 parts.
 Bran 10 parts.

Mix them well. When wanted, take a sufficient quantity and mix it with water to a dough to be applied to the retort or flask.

4025. Cement for Preventing Leaks About Chimneys.

Dry sand, 1 part; ashes, 2 parts; clay, dried, and pulverized, 3 parts. All to be pulverized and mixed into a paste with linseed oil. Apply it when soft, and when it becomes hard water will have no effect on it.

4026. Cement Impervious to Sulphide of Carbon.

To the best quality of white glue add 10 per cent of molasses.

4027. Cement for Quickly Closing Leaky Places in Barrels.

Tallow 25 parts.
 Wax 20 parts.
 Lard 40 parts.
 Sifted wood ashes..... 25 parts.

Are melted together by heating and applied to the defective place by means of a heated knife blade.

4028. Filling for Old Nail Holes.

Take fine sawdust and mix into a thick paste with glue, pound it into the hole, and when dry it will make the wood as good as new.

4029. Pitch for Boats.

Pine tar..... 1 gallon.
 Rosin 3 pounds.

4030. Pitch for Boats.

Coal tar..... 1 gallon.
 Rosin 3 pounds.

4031. Cracks in a Boat.

Melt equal parts of pitch and gutta-percha in an iron pot; thoroughly mix by stirring. Make up in sticks and melt into the cracks with a warm iron.

4032. Cement for Hot Water Pipes.

Two parts of ordinary well-dried powdered loam and 1 part of borax are kneaded with sufficient water to a smooth dough, which must at once be applied to the joints. After exposure to heat, the cement adheres even to smooth surfaces so firmly that it can only be removed with a chisel.

4033. Cement for Hot Water Pipes.

Mix 430 parts by weight of white lead, 520 of powdered slate, 5 of chopped hemp, and 45 of linseed oil. The two powders and the hemp cut into lengths of about $\frac{1}{4}$ inch, are mixed intimately, the linseed oil gradually added, and the mass is then kneaded until it has attained a uniform consistency. It is claimed that this preparation keeps better than ordinary red lead cement.

4034. Cement, Oil Resisting.

Sixteen pounds of first quality of glue, 1 pound nitric acid, and 1 pound of gum ammonia. The glue is warmed over a fire until it is well dissolved when the gum ammoniac is added and well mixed. Have the metal surface dry and warm. This cement can be used for fastening gutta-percha, rubber, canvas, leather or similar substances to metal and is not susceptible to the action of oil.

4035. Cement for Mineral Oil.

Boil 3 parts resin with 1 part caustic soda and 5 parts of water. The composition is then mixed with half its weight of plaster of paris, and sets firmly in half to three-quarters of an hour. It is very adhesive, and excellent for attaching the brasswork to mineral oil lamps.

4036. Transparent Capping Fluid for Bottles.

Dip the heads of bottles, suitably corked; and, if desirable, provided with a tag or label pasted over the cork, into a fluid prepared with the following ingredients:

Colophonum (resin) 20.0 parts.
 Ether 40.0 parts.
 Collodion 60.0 parts.
 Coloring matter to suit.

The liquid (varnish) dries rapidly and leaves a beautiful transparent coating.

4037. Bottle Cement.

Mix together:

Resin, in powder 3 parts.
 Soda, caustic 1 part.
 Water 5 parts.

And afterwards incorporate:

Plaster of paris..... $4\frac{1}{2}$ parts.

After about three-quarters of an hour the mixture will become hard. It is very adhesive, not porous, and is but little affected by boiling water. It must be applied to stoppers when fresh.

4038. Bottle Cement.

Shellac, 2 pounds; resin, 4 pounds; Venice turpentine, $1\frac{1}{2}$ pounds; red lead, $1\frac{1}{2}$ pounds. Fuse the shellac and resin cautiously in a copper pan over the fire; when melted add the turpentine, and lastly red lead, which should be dry and warm. Pour into molds, or make into sticks by rolling on a marble slab. Care must be taken to have the red lead equally diffused through the melted mass by constant stirring, as owing to its great specific gravity it is apt to sink to the bottom.

4039. Bottle Cement.

Resin and beeswax, equal parts; melt them together and add sufficient Venetian red to give a good color, and enough neatsfoot oil to prevent its being brittle when cold.

4040. Bottle Cement.

Sealing wax, 1 pound; resin, 1 pound; beeswax, 8 ounces; melt together. Bottles may be sealed by dipping the corks in this melted mixture. If it froths, add a very small piece of tallow and stir.

4041. Bottle Cement.

Resin, 15 parts; tallow, 4; beeswax, 2; melt and color with red ochre or ivory black.

4042. Bottle Cement.

Black pitch, 6 pounds; ivory black and whiting, each 1 pound. Melt the pitch and add the other ingredients, hot and dry.

4043. Bottle Cement, Maissiat's.

India rubber is melted either with or without about 15 per cent of beeswax or tallow; quicklime in fine powder is gradually added, and the heat continued until change of odor shows that combination has taken place, and until a proper consistence is obtained. Used as a waterproof and air-tight covering for corks, bungs, etc.

4044. Bottle Cement.

Copal varnish made thick with zinc white, red lead, ivory black or any other color and applied like a paint.

4045. Bottle Cement.

Melt yellow beeswax with its weight of turpentine, and color with finely powdered Venetian red. When cold it has the hardness of soap, but is easily softened and molded with the fingers, and for sticking things together temporarily it is invaluable.

4046. Bottle Cement.

To render corks impervious to air, acids, alkalies and corrosive liquors generally, boil them for some time in melted paraffin. They must be kept under the surface of the melted material, and should be heated and allowed to cool several times, so as to get all the air out of the pores. Corks thus treated cut easily and make very close joints.

4047. Mouth Glue.

Dissolve 100 parts of white gelatin and 50 parts of crystallized sugar in 150 parts distilled water by aid of the water bath and continuing the operation until the product measures 200 parts, when it can be formed into sticks.

4048. Good Mouth Glue.

Soak for two or three days:

Isinglass 1 part.
Parchment shavings $\frac{3}{4}$ part.
Rock candy $\frac{1}{4}$ part.

Then boil the whole in an earthen pot, stirring constantly to prevent the mass from burning. When it is boiled down to about one-half the quantity, strain the fluid through a coarse cloth, and when about half cold pour a tin layer of it upon a stone slab.

4049. Good Mouth Glue.

Pieces of ordinary glue are soaked for two days. The water is then poured off and the glue melted over a moderate fire. To 1 pound of glue add $\frac{1}{2}$ pound of white sugar, mix thoroughly and then pour the mass into suitable molds and allow it to stand quietly for a few days. In using the glue it is moistened with the tongue.

4050. Waterproof Glue for Wooden Utensils.

Boil for ten minutes a mixture of:

Thick solution of glue..... 10 parts.
Linseed oil varnish..... 5 parts.
Litharge 1 part.
And use the compound while hot.

4051. Zinc Glue.

Zinc oxide..... 5 parts.
Gelatine 5 parts.
Water 6 parts.
Glycerine 8 parts.

4052. Liquid Glue.

A solution of 8 ounces of glue in $\frac{1}{2}$ pint of water is made. To this add $2\frac{1}{2}$ ounces strong aqua fortis (nitric acid), stirring all the while. Effervescence will take place with the evolution of orange nitrous fumes. When all the acid has been added, the liquid is allowed to cool. Kept in a well-stoppered bottle, it will remain permanently liquid.

4053. Liquid Glue.

Fill a jar or bottle with small pieces of glue, and cover with acetic acid. Then place in a vessel of hot water for several hours, until all the glue is dissolved.

4054. Liquid Glue.

Glue 1 ounce.
Cider vinegar..... 2 ounces.
Dissolve with the aid of heat.

4055. Liquid Glue.

Good white or colored
gum..... $5\frac{1}{2}$ av. ounces.
Acetic acid..... $5\frac{1}{2}$ fl. ounces.
Carbolic acid..... 5 grains.
Water 1 pint.

Soak the glue in 6 ounces of the water for 12 hours. Then heat by means of a water-bath until the glue is dissolved, and add to the solution the acetic acid and enough water to measure 1 pint.

4056. Liquid Glue.

Colla 1 pound.
Gum acacia..... 4 ounces.
Glycerine 4 ounces.
White sugar..... 4 ounces.
Acid acetic..... 4 ounces.

Dissolve the glue and acacia in hot water add the other ingredients and enough hot water to make 1 gallon.

4057. Liquid Glue.

Clear gelatin..... 100 parts.
 Cabinet makers' glue..... 100 parts.
 Alcohol 25 parts.
 Alum 2 parts...
 Mix with acetic acid (20 per cent) and heat on water-bath for six hours.

4058. Liquid Glue.

Glue 100 parts.
 Water 600 parts.
 Dissolve by the aid of heat, add when cold Nitric acid..... 16 parts.

4059. Liquid Glue.

Best carpenters' glue..... 120 parts.
 Acetic acid..... 10 parts.
 Water 130 parts.
 Alum..... 1 part.
 Digest in water-bath until dissolved, and when cold add alcohol, 30.

4060. Liquid Glue.

Slaked lime..... 40 parts.
 Sugar 60 parts.
 Water 180 parts.
 Glue 60 parts.
 Dissolve the lime and sugar in the water heated to 75 degrees C., then introduce the glue, and, after allowing to swell, again apply heat until dissolved.

4061. Liquid Glue.

Gelatin..... 2½ drams.
 Glue Russian..... 2½ drams.
 Acid acetic glacial..... 2 ounces.
 Spirit 2½ ounces.
 Alum 2 grains.
 Acetic acid, 2 per cent.... 2 grains.
 Put the gelatin, glue and acetic acid over a water-bath until liquid, then add the alum and spirit, stir until thoroughly mixed, then take off and pour into bottles for use.

4062. Liquid Glue.

Acetic acid..... 4 ounces.
 White glue..... 3 ounces.
 French gelatin..... 4 drams.
 Shellac varnish..... 4 fl. drams.
 Distilled water..... 4 ounces.
 Dissolve the glue in the acid with heat, and the gelatin in water with heat. Mix the two solutions gradually until homogeneous, then add the varnish, and put into bottles.

4063. Liquid Glue.

Glue 100 parts.
 Sugar 40 parts.
 Gum arabic..... 30 parts.
 Dissolve in 200 parts of hot water, then add:
 Alum 5 parts.
 Dissolved in:
 Water, hot..... 20 parts.

4064. Liquid Glue.

One part of phosphoric acid, sp. gr. 1.120, diluted with 2 parts of water, is nearly neutralized with carbonate of ammonium, 1 part of water added, and then in a porcelain vessel sufficient glue is dissolved in the liquid to obtain a syrupy consistence. It must be kept in well closed bottles. The addition of glycerine or sugar will cause the glue to gelatinize. The addition of chloride of calcium to a solution of glue is recommended to prevent it from cracking by heat or extreme dryness. Thus prepared it can be used upon glass and metallic surfaces.

4065. Liquid Glue for Bookbinders'**Use.**

For 50 pounds of the best glue (dry), take 9 pounds glycerine. Soak the glue for 10 minutes and heat to solution, and add the glycerine. If too thick, add water. Color with aniline dissolved in alcohol.

4066. To Bleach Glue.

A glue can be bleached by adding oxalic acid and oxide of zinc, in the proportion of 1 per cent of the glue. The latter should first be made into a pulp with water and heat, and the chemicals added while the mass is hot. The same process may be used for bleaching blood albumen, but the degree of heat should not be above 122 degrees F., or the albumen will coagulate.

4067. Mucilage.

Dextrin 10 drams.
 Glucose ½ dram.
 In which is dissolved a solution of
 Alum 15 grains.
 Glycerine 1 dram.
 Water to make 2 ounces

4068. Mucilage.

White dextrin 4 ounces av.
 Gum arabic 2 ounces av.
 Sugar (granulated)..... 1 ounce av.
 Water 12 fl. ounces.
 Dissolve the gum arabic and sugar in 6 fluid ounces of the water. Dissolve the dextrin in 6 fluid ounces of hot water by the aid of heat, and mix the solutions when cool. This makes a white, not a clear, mucilage, very adhesive, and much better than gum arabic for paper labels.

4069. Mucilage.

Dextrin, white 6 ounces.
 Acetic acid, dilute..... 1 ounce.
 Oil of cloves..... 10 drops.
 Glycerine 1 ounce.
 Water to make..... 16 ounces.
 Mix the dextrin thoroughly with 6

ounces of cold water, add 8 ounces of boiling water, boil five minutes, stirring constantly; add hot water sufficient to make 14 ounces. When it is cold, add the acetic acid, oil of cloves and glycerine. The oil must be thoroughly mixed with the remainder.

4070. Mucilage.

Dextrin 3 ounces.
Acid acetic 1 ounce.
Water 5 ounces.

Dissolve by aid of heat. When cold, add:

Methylated spirit..... 1 ounce.

4071. Mucilage.

To 250 grams of a concentrated solution of acacia (2 parts in 5 parts water) add a solution of .2 grams of crystallized sulphate of aluminum in 29 grams of water. Alum in place of the salt mentioned may be used, but gives less satisfaction. For decolorizing mucilage, freshly precipitated hydrate of aluminum is recommended. The ordinary mucilages, particularly if very concentrated, often fail in their object by merely wetting without causing to adhere, pasteboard to pasteboard, wood to wood, or a metal surface, and without cementing glass, china, pottery, etc. The addition of aluminum sulphate is recommended as sufficient to impart to a concentrated mucilage the desired adhesiveness.

4072. Mucilage.

Allow 1 part of white glue (or gelatin) and 2 parts of gum arabic to swell in 10 parts of water; then dissolve, after adding one-fourth part white sugar, at a gentle heat, and strain if necessary. To prevent from spoiling add a few drops of carbolic acid or oil of cloves.

4073. Mucilage.

Paper pasted, gummed, or glued on to metal, especially if it has a bright surface, usually comes off on the slightest provocation, leaving the adhesive material on the back of the paper, with a surface bright and slippery as ice. It is, however, said to be now overcome by dipping the metal into a strong and hot solution of washing soda, afterward scrubbing perfectly dry with a clean rag. Onion juice is then applied to the surface of the metal, and the label pasted and fixed in the ordinary way. It is said to be almost impossible to separate paper and metal thus joined.

4074. Mucilage.

Paper may be stuck on wood by means of this solution: Gum arabic, half ounce; powdered gum tragacanth, half ounce;

water, one and one-half ounces; and acetic acid, twenty drops. It will cause labels to adhere very firmly without staining them, unless the paper is of an unusually bad quality.

4075. Mucilage.

One part of gum arabic is dissolved in 2 parts of water, 0.1 part each of pure carbonate of calcium and coarsely powdered animal charcoal added, and the whole allowed to stand 24 hours. The solution is then diluted with 10 parts of water, filtered, and finally evaporated to the proper weight (3 parts).

4076. Dextrin Mucilage.

Dextrin 2 ounces.
Powdered alum 1 dram.
White sugar ½ ounce.
Water 4 ounces.
Solution carbolic acid..... 2 drams.

Dissolve all of the ingredients except the carbolic acid, in the water previously raised to the boiling point. Continue the boiling until dissolved; when cold, add the carbolic acid.

4077. Dextrin Mucilage.

Oil cloves 10 minims.
Dilute acetic acid..... 1 ounce.
Glycerine, pure 1 ounce.
White dextrin 1 ounce.
Water, to make..... 16 ounces.

Mix the dextrin thoroughly with 6 ounces of cold water, and on this pour 8 ounces of boiling water; boil for five minutes, stirring constantly, and then make up to 14 ounces. When cold, add the acetic acid and glycerine, in which the oil has been thoroughly mixed, and stir the whole well together.

4078. Mucilage of Acacia.

Pure gum acacia..... 34 ounces.
Pure water 66 ounces.
Hydronaphthol 30 grains.

Place the gum and hydronaphthol in a cork bag or one extemporized with cheese cloth and suspend the same in a crock containing the water.

4079. Flexible Mucilage.

To 20 parts of alcohol add 1 part of salicylic acid, 3 parts of soft soap and 3 of glycerine. Shake well and then add a mucilage made from 93 parts of gum acacia and 180 parts of water. This keeps well and is thoroughly elastic.

4080. Gum Arable Substitute.

Wheat bran is the substance treated as follows: By first washing with water all adhering starch is removed from the bran, whereupon it is boiled with an ammoniated salt solution in order to remove the

proteins. After expressing and lixiviating with clear water, there remains a mass of cellular tissue containing metarabin. This cellular tissue is boiled under pressure, with milk of lime or a 1 per cent solution of potassa, then expressed, the liquid neutralized and finally concentrated by evaporation. The resulting mucilage is claimed to possess adhesive properties.

4081. Gum Arabic Substitute.

Lime, slaked 3 ounces.
Sugar, granulated 12 ounces.
Water 36 ounces.
Glue, enough.

Dissolve the sugar in the water, then boil and add the lime. In a few days the lime sinks to the bottom, leaving a clear, thick mucilage, fully as adhesive as if made with gum. One or two ounces of good glue, added to 15 ounces of the solution, keeps it fluid.

4082. Standard Adhesive Mucilage.

Gum arabic in fine powder 8 ounces.
Glucose 2 pounds.
Boiling water 20 fl. ounces.
Acetic acid 1 ounce.

Dissolve the gum arabic in the water, then add the glucose, and bring the whole to a good boil, stirring well. Remove from the fire, and, lastly, add the acetic acid.

4083. Postage Stamp Mucilage.

Dissolve 1 pound of gum dextrin in a pint of boiling water, strain through flannel and add 2 ounces of acetic acid. When nearly cold add 4 ounces of alcohol, stir constantly, and finally add enough warm water to make 1 quart.

4084. Stick Mucilage.

Glue, 5 ounces; sugar, 1 ounce; dissolved in water, boiled down, poured into molds and dried.

4085. Stick Mucilage.

Isinglass and parchment glue, each 1 ounce; sugar candy and gum tragacanth, each 2 drams; add to them 1 ounce of water; boil the whole till the mixture appears, when cold, of the consistence of glue. Then form it into small rolls for use.

4086. Stick Mucilage.

Boil 1 pound best glue, strain it very clear; boil also 4 grains of isinglass; put it into a double glue pot, with $\frac{1}{2}$ pound of fine brown sugar and boil it pretty thick, then pour it into plates or molds. When cold, cut and dry them for the pocket. It immediately dilutes in warm water and fastens the paper without the process of dampening, or it may be used by softening it in the mouth and applying it to the paper.

4087. Stick Mucilage.

Dissolve gum arabic in hot water to form a syrupy liquid, add a little oil of cloves, and thicken with powdered gum dextrin; mold and dry slowly.

4088. Paste for Bottle Labels.

Gum tragacanth..... 1 ounce.
Gum arabic..... 4 ounces.
Dissolve in
Water..... 1 pint.
Strain, and add
Thymol..... 14 grains.
Suspended in
Glycerine..... 4 ounces.
Add water to make..... 2 pints.

This makes a thin paste, suitable for labeling bottles, tin or wooden boxes, or for any other purpose paste is usually called for. It makes a good excipient for pill masses, and does nicely for emulsions, the very small percentage of thymol not being of any consequence. This paste will keep sweet indefinitely, the thymol preventing fermentation. It will, on standing, separate, but a single shake will mix it sufficiently for use.

4089. Paste for Bottle Labels.

Rye flour..... 4 ounces.
Powdered alum..... $\frac{1}{2}$ ounce.

Rub to a smooth paste with 8 ounces of cold water, strain through a cheese cloth and pour into 1 pint of boiling water. Continue heat until thickened to suit. When nearly cold, add:

Glycerine..... 1 ounce.
Oil of cloves..... 30 drops.

This is suitable for tin or wood boxes, or bottles, and keeps sweet for a long time.

4090. Paste for Labels on Tin.

Mix 1 pound of the very best rye flour with from 6 to 8 ounces of dark brown sugar and boiling water until the mixture is of a proper consistency. If the labels are light in color, the lightest variety of brown sugar should be employed. This paste sours very quickly and should be made every day, but it is very effective, and is especially desirable where a large number of labels are to be put on.

4091. Paste for Labels on Tin.

Make gum tragacanth into a mucilage of the desired consistency with hot water, and then add to it 10 per cent of flour.

4092. Paste for Labels on Tin.

Boil 2 pounds of flour with 1 quart of water to make a stiff paste; add 2 ounces of tartaric acid and 1 pint of molasses. Boil together until stiff, and add 10 drops of carbolic acid.

4093. Paste for Labels on Tin.

Shellac, 2 parts; borax, 1 part; water, 16 parts; are boiled together until the shellac dissolves.

4094. Paste for Labels on Tin.

Add 1 ounce of dammar varnish to 4 ounces of tragacanth paste.

4095. Paste for Labels on Tin.

Roughen the surface with emery paper, then apply the label—preferably with water glass as an adhesive agent.

4096. Paste for Labels on Tin.

Balsam of fir, 1 part; turpentine, 3 parts. Dissolve. This is applicable only with good qualities of well-sized labels.

4097. Paste for Labels on Tin.

Clean the surface by rubbing with solution of caustic soda, and then thoroughly wipe before applying the label. This is employed on the principle of attributing the difficulty to the presence of a thin layer of grease, as is also the case with the addition of water of ammonia to the paste.

4098. Paste for Labels on Tin.

Brush the surface over with a thin streak of butter of antimony or with oleate of mercury; clean well and apply the label.

4099. Paste for Labels on Tin.

Brush over with strong tannin solution, allow to dry, and apply the label, previously well gummed.

4100. Paste for Labels on Tin.

Prepare a solution by boiling 2 ounces of shellac and $\frac{1}{2}$ ounce of borax in 8 ounces of water. The space on the tin to be covered with the label is given one coat of this solution, and after drying the label is applied with ordinary mucilage.

4101. Paste for Labels on Tin.

Mucilage of acacia..... 95 parts.

Glycerine..... 5 parts.

The surface of the tin must be cleaned if necessary.

4102. Paste for Labels on Tin.

For fastening labels to tin surfaces where they are exposed to moisture, there is nothing superior to egg albumen. The albumen is mixed with equal parts of water, or two parts of the latter may be used to one of the former, and the mixture used as ordinary mucilage. When it is dry, however, a hot iron is carried quickly over the surface of the label, by which means the albumen is altered so as to become insoluble in water.

4103. Paste for Labels on Tin.

Add Venice turpentine to good starch paste.

4104. To Make Paper Adhere to Metal.

Gum tragacanth, 30 grains; acacia gum, 120 grams; water, 500 cubic centimeters. Dissolve, filter, and add $2\frac{1}{2}$ grams of thymol suspended in 120 cubic centimeters of glycerine; then add enough water to make up the bulk to 1 liter. Can be used for metal, glass or wood.

4105. Caseine Cement for Metals.

Washed quartz sand..... 10 parts.

Caseine..... 8 parts.

Slaked lime..... 10 parts.

4106. Label Paste.

Gum arabic 12 grams.

Gum tragacanth 3 grams.

Water 60 grams.

Thymol 0.10 grams.

Glycerine 12 grams.

Dissolve the gums in the water, strain through cloth, then add the thymol, previously mixed with the glycerine, and enough water to make the whole weigh 120 grams.

4107. Label Paste.

Rice starch 120 grams.

Gum arabic, powdered.... 30 grams.

Water 240 grams.

Mix well in a mortar, strain through cloth, and add 600 grams boiling water. Heat the mixture until it acquires a proper consistency, and add, after cooling,

Glycerine 30 grams,

Oil of cloves..... 20 drops.

4108. Label Paste.

Rice starch 120 grams.

Water 600 grams.

Nitric acid 4 grams.

Carbolic acid 10 drops.

Glycerine 30 grams.

Oil of cloves..... 10 drops.

Mix the starch with the water, strain, add the nitric acid, heat to a proper consistency, cool, and add the other ingredients.

4109. Label Paste.

Wheat flour 4 troy ounces.

Nitric acid 1 fl. dram.

Oil of cloves..... 5 minims.

Boric acid 10 grains.

Water 1 pint.

Mix the flour thoroughly with the borlic acid and water and strain through a sieve to avoid lumps, add the nitric acid and heat with constant stirring until the mixture has thickened. When nearly cold add the oil of cloves and stir. When required for putting labels on tin add 10 per cent of glycerine to the paste.

4110. Label Paste.

Dextrin 8 parts.
 Acetic acid 2 parts.
 Alcohol 2 parts.
 Water 10 parts.

Mix well the dextrin with the acid and water, then add the alcohol.

4111. Bichromated Paste.

(To attach paper to glass and for use in damp climates.)

Flour 2 teaspoonfuls.
 Water 4 ounces.
 Bichromate of potash... 5 grains.

The flour must be rubbed to a smooth batter with the water, then placed in a saucepan over a fire and kept stirred till it boils. Add the bichromate slowly, stirring all the time. Then stand to cool. This paste must be kept in the dark and used as soon as possible. Soak the paper in it and attach to the glass, and then place in direct sunlight for a day. This sets up a chemical change in the bichromate and renders the paste insoluble.

4112. Paste for Photographs.

Arrow root 10 parts.
 Water 100 parts.
 Gelatin 1 part.
 Alcohol 10 parts.
 Phenol, quantity sufficient.

Mix the arrow root with a small quantity of water and boil four or five minutes. Soak the gelatin in the 100 parts of water, and mix with the arrow root. When cold add the alcohol and a few drops of phenol.

4113. Rice Paste.

May be prepared by mixing rice flour and water, which mixture is then heated to boiling point until the required consistency is obtained. This paste possesses great adhesive power, and is recommended where it is desired that the object to be pasted on or together should undergo no change in color or shading.

4114. Trunkmakers' Paste.

To 1 pound of the best wheat flour add 2 tablespoonfuls of very finely powdered resin and 1 tablespoonful of alum. Mix well together. Add distilled or rain water, stirring all the time until the mixture is of the consistency of a thinnish cream. Place in a saucepan over a clear fire and heat, stirring from the bottom all the time to prevent the formation of lumps. When it becomes of a stiff consistency so that the spoon will stand upright, it is sufficiently cooked. Remove from the fire and cover closely until cold.

4115. Stereotypers' Paste.

Take 5 ounces of flour, 7 ounces of white starch, a large tablespoonful of powdered alum, and 4 quarts of water. Put the flour, starch and alum into a saucepan, and mix with a little of the water, cold, until the whole becomes of the consistency of thick cream. Then gradually add the remainder of the water, stirring well meanwhile to prevent lumps. Put the mixture over the fire and stir until it boils; then let it stand until quite cold, when it should look like jelly. When ready for work add Spanish whiting, the mixture not to be too stiff to spread readily with the paste brush. Put through a fine wire sieve with a stiff brush, and it is ready for use.

4116. Adhesive Office Paste.

Take 4 ounces of common gelatin in small pieces and steep it in 16 ounces of water until it becomes soft, then by the aid of the heat of a water bath dissolve it, and while still hot pour it into a mixture of 2 pounds of good flour paste and a pint of water. Heat the whole to boiling, and when thickened remove from the fire; while cooling add 6 drams of silicate of soda and stir into the mixture with a wooden spatula. This preparation will keep good for an indefinite period, and is very adhesive. The addition of 2 drams of oil of cloves is an improvement.

4117. Paste for Pads.

Glue, 4 pounds; glycerine, 2 pounds; linseed oil, $\frac{1}{2}$ pound; sugar, $\frac{1}{4}$ pound; aniline dye, quantity sufficient to color. The glue is softened by soaking it in a little cold water, then dissolved, together with the sugar, in the glycerine, by aid of heat over a water bath. To this the dyes are added, after which the oil is well stirred in. It is used hot.

4118. Paste for Pads.

Glue, 1 pound; glycerine, 4 ounces; glucose syrup, about 2 tablespoonfuls; tannin, one-tenth ounce. Give the composition an hour or more in which to dry or set before cutting or handling the pads.

4119. Strong Paste for Pasteboard.

Soak 4 parts of glue in 15 parts of cold water until soft. Gently warm mixture until it becomes clear, then mix with 65 parts of boiling water. Mix, in another vessel, 30 parts of starch and 20 parts of cold water until it becomes a perfectly smooth paste. Gradually add this to the other mixture, which must be kept near the boiling point. Heat the whole mass for a few minutes. A little carbolic acid may be added to prevent souring.

4120. Stiekfast Paste.

Wheat flour 1 ounce.
 Powdered tragacanth 4 drams.
 Powdered gum arabic..... 4 drams.
 Salicylic acid 30 grains.
 Oil of wintergreen..... 3 drops.
 Water 12 fl. ounces.

Mix the powders and gradually add the water, then bring to the boiling point; allow to simmer for twenty minutes, stirring constantly. When cold add the oil.

4121. Paste for Store Use.

Flour 4 ounces.
 Powdered gum arabic..... 1 ounce.
 Glycerine 1 fl. ounce.
 Salicylic acid 60 grains.
 Water 2 pints.

Mix all in a mortar, pass through a sieve, boil for a few moments, stirring to prevent burning. Avoid contact with iron.

4122. Bill Poster's Paste.

Wheat flour, 1 pound; water, 8 ounces; alum, $\frac{1}{2}$ ounce; oil of cloves, 5 drops. Mix, and make a paste.

4123. Permanent Paste for Paper Hangers.

Dissolve one ounce of alum in one quart of warm soft water. When cold add flour to make it about the consistency of cream, then add half thimble of resin and half ounce of sugar of lead. The above is the preparation for a bucket of paste.

4124. Milliners' Stamping Paste.

Zinc oxide 8 ounces.
 Boiled linseed oil..... 4 ounces.

Any superfluous paste is to be removed from the stencils. Use with benzine.

4125. Paste for Mounting Botanical Specimens.

Tragacanth in powder..... 30 parts.
 Gum arabic..... 20 parts.
 Glycerine..... 30 parts.
 Water..... 60 parts.
 Bichloride of mercury..... 1 part.
 Boiling water..... 240 parts.

Mix the gums with the glycerine and water in a mortar with vigorous stirring. Dissolve the bichloride in the boiling water and add the solution to the mixture. When cold, a few drops of oil of cloves or wintergreen may be added.

4126. Mounting Starches and Pollens.

Selected gum arabic..... 2 ounces.
 Glycerine..... $1\frac{1}{2}$ fl. ounces.
 Distilled water..... $1\frac{1}{2}$ fl. ounces.
 Thymol 1 grain.

These are all placed in a wide-mouthed bottle, which is corked carefully to exclude the dust, and placed in a warm situation. It takes several days to effect a perfect

solution, the mixture being stirred up occasionally. When all is dissolved, strain through linen or filter through absorbent cotton. After filtration it is best preserved in compressible tubes.

4127. To Make Printers' Rollers.

For ordinarily fast presses on book work, the following is a good composition: Ten and one-half pounds best gluc, $2\frac{1}{2}$ gallons black molasses or honey, 2 ounces Venice turpentine, 12 ounces glycerine.

METAL POLISHES.

4128. Liquid Putz.

Oxalic acid..... 1 ounce.
 Crocus martis..... 2 ounces.
 Whiting..... 4 ounces.
 Water..... 1 pint.

Mix, and shake before using. This makes a good polishing liquid, especially for brass, copper and metals. It may be used dry (omitting the water), or applied with a little oil with rubbing, and rubbed dry with whiting.

4129. Putz Tablets.

Soap, cut fine..... 480 parts.
 Precipitated chalk..... 60 parts.
 Jewelers' rouge..... 30 parts.
 Cream tartar..... 30 parts.
 Magnesium carbonate..... 30 parts.
 Water, q. s.

Dissolve the soap in the smallest quantity of water, over a water-bath. Add the other ingredients to the solution while still hot, stirring all the time to make sure of complete homogeneity. Pour the mass into a box with shallow sides, and afterwards cut into cubes.

4130. Putz Pomade.

Oxalic acid..... 1 part.
 Peroxide of iron..... 15 parts.
 Powdered rotten stone..... 20 parts.
 Palm oil..... 60 parts.
 Petrolatum..... 4 parts.

Pulverize the acid and add the rouge and rotten stone, mixing thoroughly. Sift to remove all grit, then gradually add the palm oil and petrolatum and incorporate. Add oil of mirbane or oil of lavender to suit. Apply with a piece of flannel, rubbing off with a piece of soft paper, and polish with chamols.

4131. Polishing Paste, Soft Red.

Red oxide of iron,
 Rotten stone,
 Equal parts.

Make into a stiff paste with equal parts of vaselline and soft soap.

4132. Polishing Paste, Hard.

Rotten stone 4½ pounds.
 Oxalic acid..... 4 ounces.
 Turpentine..... 1 ounce.
 Sweet oil..... 3 ounces.
 Boiling water..... 16 ounces.

Dissolve the acid in the water, add the rotten stone and incorporate the other ingredients to make a stiff paste.

4133. Polishing Soap.

Twenty to 25 pounds liquid curd soap is intimately mixed with about 30 pounds of Swedish chalk and ½ pound Pompeian red.

4134. Polishing Soap.

Twenty-five pounds liquid cocoanut oil soap is mixed with 2 pounds tripoli, and 1 pound each alum, tartaric acid and white lead.

4135. Polishing Soap.

Twenty-five pounds liquid cocoanut oil soap is mixed with 5 pounds rouge and 1 pound ammonium carbonate.

4136. Polishing Soap.

Twenty-four pounds cocoanut oil are saponified with 12 pounds soda lye of 38-40 degrees B., after which 3 pounds rouge, 3 pounds water and 32 grams ammonia are crutched in.

Polishing soaps are generally cut into cakes and stamped or pressed, and brought into commerce with directions for use. The directions generally state that a small quantity of the soap is brought upon the metallic article to be polished with a damp flannel, and rubbed until the desired polish is obtained.

4137. Polishing Pomade.

Five pounds lard or yellow vaseline is melted and mixed with 1 pound fine rouge.

4138. Polishing Pomade.

Two pounds palm oil and 2 pounds vaseline are melted together, and then 1 pound rouge, 400 grams tripoli and 20 grams oxalic acid are stirred in.

4139. Polishing Pomade.

Four pounds fatty petroleum and 1 pound lard are heated and mixed with 1 pound rouge.

The polishing pomades are generally perfumed with essence of mirbane, and filled in tin boxes.

4140. Polishing Rags.

Dip flannel rags into a solution of 20 parts of dextrin and 30 parts of oxalic acid in 20 parts of logwood decoction; wring them gently and sift over them a mixture of finely powdered tripoli and pumice

stone. The moist rags are piled upon each other, placing a layer of powder between them. They are then pressed, taken apart and dried.

4141. Polishing Cloths.**Cloth No. 1.**

Flour of emery, finest..... 5 parts.
 Castile or ivory soap..... 10 parts.
 Water, q. s., about..... 50 parts.

Cloth No. 2.

Fine tripoli or jewelers' rouge..... 5 parts.
 Castile soap..... 10 parts.
 Water, q. s.

Dissolve the soap in the water and thoroughly mix in the powders. Soak the cloths in square pieces in the solution, wring out and dry. The coarser cloth should be used first; finish with chamois. For polishing dirty brass or silver.

4142. Silvering Paste.

Apply to the surface of the metal, rubbing well with a piece of chamois leather, a paste made of 1 part chloride of silver, 3 parts pearl ashes, 1½ parts salt and 1 part whiting, made to a sufficient consistency with water. When the article is completely silvered, wash it in water containing a very little washing soda.

4143. Silvering Solution.

Mix 1 dram nitrate of silver, 2 drams cyanide of potash, 2 drams whiting and 2 fluid ounces of water. The articles must be perfectly cleaned and the silvering solution remain in contact with the surface to be plated for some minutes, then rub well with chamois. Great care must be observed, as the solution is very poisonous.

4144. Liquid Polish for Silver Plated Ware.

Dissolve 3 to 4 drams of cyanide of potassium and 8 to 10 grains of nitrate of silver in 4 ounces of water. Apply with a soft tooth brush, wash the object thoroughly with water, dry with a soft linen cloth and polish with a chamois skin.

4145. Polishing Powder for Silver and Nickel.

A good treatment for silver is to wash it with a weak solution of sodium hyposulphite. After the article is thoroughly dried it is rubbed with a very fine linen rag and some carbonate of ammonia. The effloresced portion of the common carbonate in very fine powder will answer. The rough surface should be rubbed with a brush, an old tooth brush, not too stiff. The article

is finally rubbed with a piece of clean chamois skin. A liquid polish for nickel ware consists of 1 fluid ounce of ammonia water, 4 ounces finest prepared chalk, and 1 pint of alcohol.

4146. Putz Pomade.

Charcoal, fine powder..... 14 ounces.
 Iron oxide (subcarbonate). 3 ounces.
 Acid oleic..... 6 ounces.
 Acid stearic..... 3 ounces.
 Petroleum 6 fl. ounces.
 Essence mirbane..... 3 drams.
 Oil citronella..... 1 dram.

Mix, heat, and pass through a paint mill or sieve.

4147. Plating Paste.

Any odd pieces of silver may be utilized, if for plating metallic articles, by placing them in an ounce of nitric acid, and boiling them for an instant. The acid having dissolved the silver, throw in a good handful of common salt, then make into a paste with common whiting. The paste is to be applied with wash leather dampened in water.

4148. Gilding Paste.

Chloride of gold..... 36 grains.
 Cyanide of potassium..... 60 grains.
 Water 1 dram.
 (or sufficient.)

Dissolve the chloride in half the water, and the cyanide in the remainder, mix the two solutions, let stand 15 minutes, and thicken the mixture to a paste with

Prepared chalk.....100 grains.
 Cream of tartar..... 5 grains.

Apply the paste to the surface to be gilded (which must be perfectly clean), let stand an hour and polish with chamois. This is said to be an excellent preparation for any metallic surface except iron or steel, the coating, with proper care, lasting many months.

To Color Polished Brass.

In the following nine formulas the brass objects are put into the boiling solutions for a longer or shorter time, according to the shade of color required:

4149. To Color Polished Brass.

Potassium chlorate, 75 grains; salt of nickel, 150 grains; water, 10 ounces. Gives a beautiful dark brown color.

4150. To Color Polished Brass.

The two following solutions, when mixed (cold), separate sulphur, and brass objects immersed in the mixture become covered with iridescent crystallizations. 1. Potassium bitartrate, 75 grains; copper sulphate, 75 grains; water, 10 ounces. 2. Sodium hyposulphite, 225 grains; water, 5 ounces.

4151. To Color Polished Brass.

Copper sulphate, 120 grains; ammonium hydrochlorate, 30 grains; water, 2 pints. Gives greenish shades.

4152. To Color Polished Brass.

Salt of nickel, 75 grains; sulphate of copper, 75 grains; chlorate of potassium, 75 grains; water, 10 ounces. Gives a yellow brown.

4153. To Color Polished Brass.

Potassium chlorate, 150 grains; copper sulphate, 150 grains; water, 2 pints. Give shades of brown, from orange brown to cinnamon.

4154. To Color Polished Brass.

Orpiment, 75 grains; sodium carbonate (crystals), 150 grains; water, 10 ounces. Gives a red, passing to blue, pale lilac, and finally white.

4155. To Color Polished Brass.

Hepar of sulphur (potassa sulphurata), 15 grains; ammonia, 75 grains; water, 4 ounces. Used cold. After long immersion objects acquire a very beautiful blue color.

4156. To Color Polished Brass.

Potassium chlorate, 75 grains; nickel carbonate, 30 grains; salt of nickel, 75 grains; water, 10 ounces. Gives, after long ebullition, first a yellow-brown shade, finally a fire red.

4157. To Color Polished Brass.

Copper sulphate, 435 grains; sodium hyposulphite, 300 grains; potassium bitartrate, 150 grains; water, 1 pint. Gives the brass first a rosy tint, then colors it violet and blue. If to the above are added sodium hyposulphite, 300 grains; ammoniacal sulphate of iron (ammonio-ferric sulphate?), 300 grains, the tints are yellowish, then orange, rosy, and finally blue.

4158. Magic Polish for Brass.

Sulphuric acid, 20 parts; pulverized bichromate of potash, 10 parts; dilute with an equal weight of water; apply well to the brass. Wash well in water, immediately wipe dry, and polish with rotten stone.

4159. Window Polishing Paste.

Prepared chalk..... 90 parts.
 White bole..... 5 parts.
 Armenian bole..... 5 parts.
 Water..... 50 parts.
 Alcohol..... 25 parts.

Rub together into a smooth paste. The paste is to be rubbed on the window, allowed to dry, and then rubbed off with a cloth.

4160. Window Glass Polish.

Window glass constantly exposed to the action of sun and rain soon acquires a dullness, which cannot be removed by washing or scrubbing. This is due to a gradual surface decomposition of the glass and the solution of the sodium or potassium salts contained in it by the carbonic acid present in the atmosphere. Such glass can be restored to a fairly bright condition by washing with dilute hydrochloric acid, and afterward rubbing with moistened chalk or whitening.

SHOW GLOBE COLORS.

4161. Canary, for Show Globes.

Make a solution of picric acid in alcohol and add to water to form the desired shades.

4162. Yellow, for Show Globes.

Sesquichloride of iron..... $\frac{1}{2}$ pound.
Hydrochloric acid 1 quart.
Dissolve and dilute with water.

4163. Yellow, for Show Globes.

To a strong solution of French berries add a little alum.

4164. Yellow, for Show Globes.

Dissolve gamboge or annatto in solution of potash, dilute with water, and add a little alcohol.

4165. Yellow, for Show Globes.

A solution of equal parts of nitre and potassium chromate.

4166. Yellow, for Show Globes.

A solution of potassium bichromate.

4167. Amber, for Show Globes.

Dragon's blood, in coarse powder 1 part.
Sulphuric acid 4 parts.
When thoroughly dissolved, dilute with cold distilled water till the required tint is obtained.

4168. Orange, for Show Globes.

Make a solution of bichromate of potash in water, and darken with sulphuric acid.

4169. Blue, for Show Globes.

Distilled water 920 parts.
Blue vitriol 30 parts.
Alum 30 parts.
Sulphuric acid 20 parts.

4170. Pale Blue, for Show Globes.

Distilled water 880 parts.
Sulphate of copper..... 120 parts.

4171. Dark Blue, for Show Globes.

Distilled water 950 parts.
Ammonia water 40 parts.
Sulphate copper 10 parts.
Any desired shade can be obtained by varying the proportion of ammonia and copper salt.

4172. Dark Blue, for Show Globes.

Copper sulphate 2 ounces.
Sulphuric acid $\frac{1}{2}$ ounce.
Water 20 ounces.

4173. Dark Blue, for Show Globes.

A solution of soluble blue in oxalic acid and dilute to the required shade.

4174. Dark Blue, for Show Globes.

Solution of indigo in sulphuric acid, diluted with water.

4175. Dark Blue, for Show Globes.

Sulphate copper 80 grains.
Water ammonia 2 fl. ounces.
Water 16 pints.

4176. Dark Blue, for Show Globes.

Sulphate copper 160 grains.
Solution potash 1 pint.
Glycerine $\frac{1}{4}$ pint.
Water 16 pints.
Dissolve sulphate of copper in sufficient water, add to the solution potash, then glycerine, until complete solution results. Finally add the remainder of the water.

4177. Emerald Green, for Show Globes.

Nickel 85 grams.
Hydrochloric acid 132 grams.
Nitrous acid 55 grams.
Distilled water to make. 4,000 grams.
Dissolve the nickel in the hydrochloric acid, add the water, then the nitrous acid.

4178. Grass Green, for Show Globes.

Copper sulphate 35 grams.
Ammonium chloride 35 grams.
Water to make..... 1,000 grams.
First dissolve the copper salt in the water, then add the ammonium chloride.

4179. Sea Green, for Show Globes.

Copper acetate..... 4 grams.
Acetic acid 36 grams.
Water to make..... 1,000 grams.
Add the acetic acid to the acetate of copper and triturate with the water till dissolved.

4180. Green, for Show Globes.

Dissolve several large copper pennies and a nickel in nitric acid. This solution when diluted with water, furnishes a beautiful, permanent green color, which can be adjusted to any desired shade by varying the proportion of diluent.

4181. Dark Green, for Show Globes.

Dissolve 8 ounces of sulphate of copper and 40 grains (or quantity sufficient) of potassium bichromate in two gallons of water.

4182. Dark Green, for Show Globes.

Sulphate copper 1 dram.
Water of ammonia..... 1 fl. dram.
Water 1 pint.

Mix and dissolve.

To the above, then add, previously dissolved in 1 pint water, bichromate potassium 40 grains, in amount sufficient to cause a slight permanent precipitate of cupric chromate. Then add enough water to bring to the measure of 16 pints or more. The subsequent addition of a small amount of ammonia water to bring to the measure of 16 pints or more. The subsequent addition of a small amount of ammonia water redissolves any precipitate of cupric chromate. In this, as in all other formulas for show-bottle colors, the best results are obtained by using distilled water. If time permits, a further benefit results by letting the color stand for some weeks in plain bottles before filtering into the show bottle. A greater depth of green results from increasing the amount of solid ingredients, in the proportion as given. The novice should bear in mind that show-bottle colors will appear to the eye much more attenuated when in a mortar than when in the bottle.

4183. Olive Green, for Show Globes.

Copper sulphate 70 grams.
Hydrochloric acid 34 grams.
Iron subcarbonate 8 grams.
Water to make..... 1,000 grams.

Dissolve the sulphate of copper in the water; dissolve the iron carbonate in the acid; mix and filter.

4184. Pink, for Show Globes.

Cobalt oxide..... 1 gram.
Nitric acid 49 grams.
Water to make..... 1,000 grams.

Dissolve the cobalt in the acid, then add the water.

4185. Pink, for Show Globes.

Dissolve in water, separately, four ounces ammonium carbonate and one dram of chloride of cobalt; mix the solutions and add at once sufficient water to make 2 gallons.

4186. Pink, for Show Globes.

Nitrate cobalt 100 to 270 grains.
Carbonate ammonium 5 av. drams.
Water 18 pints.

Triturate the nitrate cobalt in a mortar with the carbonate ammonium, adding

water enough until solution is effected, and the at first formed precipitate of cobalt carbonate is redissolved, then adding the remainder of the water, treating otherwise as directed above. The smaller quantity of nitrate cobalt will suffice where a large bulk of fluid is interposed between the light and the window. The greater when the reverse.

4187. Crimson, for Show Globes.

Distilled water 960 parts.
Hydrochloric acid 36 parts.
Iodine 2 parts.
Iodide of potassium..... 2 parts.

4188. Rose, for Show Globes.

Cudbear 2 ounces.
Water 10 ounces.

Infuse (cold) for a day or so, filter, and add to the water till required shade is produced, and add to each gallon:

Stronger water of ammonia ½ ounce.

4189. Red, for Show Globes.

Distilled water 970 parts.
Sulphuric acid 20 parts.
Cochineal 6 parts.
Bitartrate potassium 4 parts.

4190. Bright Red, for Show Globes.

Distilled water..... 970 parts.
Sulphuric acid..... 10 parts.
Cochineal 8 parts.
Alum 8 parts.
Pure cream tartar..... 4 parts.

4191. Dark Red, for Show Globes.

Distilled water..... 980 parts.
Potassium iodide..... 10 parts.
Alum 10 parts.

4192. Blood Red, for Show Globes.

Distilled water..... 880 parts.
Ammonia water..... 76 parts.
Nitric acid..... 32 parts.
Cobalt metal..... 8 parts.
Alum 4 parts.

4193. Carmine, for Show Globes.

Carmine..... 3 to 5 grains.
Chloride of tin..... 3 to 5 grains.
Water of ammonia..... 1 dram.
Water enough to make.. 8 pints.

Dissolve the carmine in the water of ammonia; add the chloride of tin and water.

4194. Carmine, for Show Globes.

Solution perchloride of iron 10 drops.
Sulphocyanide of potassium 10 grains.
Water..... 1 gallon.

4195. Carmine, for Show Globes.

Dissolve carmine in ammonia, and dilute with water.

4196. Carmine, for Show Globes.

Dissolve cochineal in sal-ammoniac, and dilute with water.

4197. Carmine, for Show Globes.

Add 4 ounces sulphuric acid to 1 gallon water, and digest 8 ounces red rose leaves in the solution for 24 hours.

4198. Carmine, for Show Globes.

Dissolve madder lake in sesquicarbonate of ammonia and dilute with water.

4199. Carmine, for Show Globes.

Take a red cabbage, chopped fine, extract color by maceration with vinegar, and dilute to desired shade with water; finally add 5 or 10 per cent of alcohol.

4200. Carmine, for Show Globes.

Exhaust 1 ounce of cochineal with 1 gallon of hot water, adding $\frac{1}{2}$ ounce of sulphuric acid, and diluting with water to the proper tint.

4201. Carmine, for Show Globes.

Color 2 gallons of water with sufficient compound solution of iodine, and add about 4 ounces of hydrochloric acid.

4202. Carmine, for Show Globes.

Fuchsine 20 grains.
Acetic acid..... 2 fl. ounces.
Water..... 8 pints.

4203. Carmine, for Show Globes.

Cudbear 3 drams.
Water 1 gallon.
Mix, and add:
Nitric acid..... 4 ounces.
Let stand 48 hours and filter.

4204. Carmine, for Show Globes.

Cobalt carbonate..... 2 grams.
Hydrochloric acid, q. s.
Ammonium carbonate, q. s.
Water, to make..... 4,000 grams.

4205. Carmine, for Show Globes.

Solution chloride of iron.... 1 ounce.
Water of ammonia..... 2 ounces.
Acetic acid..... 2 ounces.
Alcohol 8 ounces.
Water 2 gallons.

First, clarify the water with the alum, 6 grains to the gallon, filter. Mix the other ingredients and add to the water; the whole is again filtered. The main object of the alcohol is to prevent freezing.

4206. Purple, for Show Globes.

Infusion logwood..... 1 gallon.
Spirits hartshorn, q. s.

4207. Purple, for Show Globes.

Sugar lead..... 3 ounces.
Powdered cochineal..... 1 dram.
Water, q. s.

4208. Purple, for Show Globes.

Add sulphate of indigo nearly neutralized with chalk to an infusion of cochineal until it turns purple.

4209. Purple, for Show Globes.

Verdigris..... 1 ounce.
Ammonia..... 1 ounce.
Water..... 6 ounces.
Dissolve.

4210. Purple, for Show Globes.

Salicylic acid..... 1 grain.
Alcohol..... 2 drams.
Tincture of iron..... 5 drops.
Water, sufficient.

Dissolve the acid in the alcohol; to it add, first, the tincture, and then enough water to produce the desired color.

4211. Violet, for Show Globes.

Mix together solutions of nitrate of cobalt and sesquicarbonate of ammonia, adding a sufficiency of ammonio-sulphate of copper to strike the required color.

Neutral metallic salts that have neither the tendency to oxydize nor to reduce, are best employed in the preparation of show globe colors. Distilled water should always be used. After an exposure of the liquid for a week to the light, it is often necessary to again filter it, in order to make it bright and perfectly transparent.

4212. Multi-Color, for Show Globes.

First ascertain the capacity of the bottle and divide by seven, to find the volume of each solution or liquid to be employed. The fluids should, in the order named, be carefully poured down the side of the bottle, held in a slightly inclined position, or through a glass tube inserted into it.

1st. One volume of sulphuric acid C. P., tinted blue with indigo sulphate; 2d, one volume of C. P. chloroform; 3d, one volume of glycerine, slightly tinted with caramel; 4th, one volume of castor oil, colored with alkanet root or alkannin; 5th, one volume 40 per cent alcohol, slightly tinted with green aniline; 6th, one volume of cod liver oil, containing 1 per cent oil turpentine; 7th, one volume of 94 per cent alcohol, slightly tinted with violet aniline.

The liquids are held in place by force of gravity, and alternate with fluids which are not miscible, so that the strata or layers are clearly defined and do not mingle by diffusion, as is the case when miscible liquids as glycerine and water are brought in direct contact with each other. Perhaps it is necessary to add that the colors suggested should be employed in quantities only sufficient to impart a pronounced tint to the fluids; too deep colors look dead, and detract from the brilliancy of the combination.

PHOTOGRAPHY.

4213. To Copy Printing on Any Paper of an Absorbent Nature.

Moisten the surface of the latter with a weak solution of acetate of iron, and use a common copying press.

4214. To Copy Photographs.

Soak off the print from the cardboard, if the picture is mounted, and print from it in an ordinary photographic printing frame as one would from a negative. Printing from a "positive" picture, of course, gives a negative from which any number of copies, or "positives," may be printed. This negative can be on glass or paper. If the ordinary gelatin plate is used, the exposure should be a few seconds—say 5 to 10—at a distance of 2 feet from a good 5-foot gas flame; if on silvery albumen paper it is a matter of minutes or possibly a half hour, during which time the print can be examined, and just that degree of density or depth secured that will give the most favorable results. The introduction of the new sensitive gelatin paper reduces the time of exposure to the same standard as the plates. Where the gelatin paper is not convenient, the chloride paper is equally serviceable. If the negative has been made on paper, it should, when dry, be rendered translucent by the following treatment: Lay the negative down on a clean sheet of paper and give a coat of castor oil, applied with a rag. Then press it with a hot iron until it shows an even dark color. Use plenty of oil. If the iron is too hot it will dry out the oil, and it will be necessary to go over it with a rag again. If the iron is not hot enough, it will fail to cause the oil to penetrate the paper sufficiently. When an even color is obtained, wipe off the excess of oil with a soft cloth, and the negative is ready to print. Instead of using a hot iron, the negative may be held over the stove until the oil sinks into the paper. The hot oil expels the air in the paper and fills the pores, so that on examination it will be found that the grain has disappeared, leaving a fine ground-glass effect.

4215. Coloring Photos.

Take any unmounted photographic print which it is desired to color, and place it on a pane of glass, the face toward the glass. In this way the image will be seen through the back of the paper. With an ordinary pencil mark on the back of the print a rough tracing of the outlines of the photograph, marking the places where the colors must afterward be applied. When this tracing has been made, remove the

photograph, lay it on blotting paper, and apply the colors to the back of the print. The colors should be spread on in flat tints, it not being necessary to use demitints. For example, a flesh tint is put in the face, and black or brown on the hair; if the picture is a landscape the trees are colored dark green, the sky part blue. It is important to use strong colors, which will show through the paper better. After this operation is finished, and when the colors are dry, the photograph is rendered transparent as follows:

First prepare the following solution:

Essence of petroleum or
benzine 10 parts.

White vaseline 1 part.

The vaseline is dissolved in the liquid, and then the mixture is ready for use. Then the photograph, which has been colored previously, is placed on some sheets of white paper, and the back of the picture is saturated first, pouring the solution on it, and rubbing with the finger to cause the mixture to penetrate, first the color and then the paper. The print is then turned face upward, and this side is saturated in the same way. After this operation the paper becomes oily and transparent, and the color begins to show through. It is left to soak thus for an hour or two, then both faces are rubbed with linen until no oily spots can be seen, when the proof is placed on white paper. The operation is then completed, and the proof has only to be pasted on cardboard, the same as other photographs. But, as the paper is still saturated with vaseline, water paste will not answer, and the same kind of varnish will have to be used. This process of painting, which can be used by anyone, gives very beautiful effects. Colors which are thus applied to the back of a photograph give it a tone of admirable freshness, and the vaseline mixture brings the image out. Besides, as the colors have the thickness of the paper to pass through, they are greatly softened and thus approach nature. The variations of the tints will be seen, by transparency, when looking at the picture. As to the colors, any that are at hand can be used, whether water colors or oil colors. The essential point is to choose the most strong colors, rose, green, etc., and to put on only a very thin layer, as otherwise the vaseline cannot pass through it. If oil colors are at hand they will be better, and the result obtained will be much prettier, for they are more striking and the vaseline passes through them better. Pastels or colored crayons can be used, but oil colors are greatly preferred to any others.

If it is desired to save, and not to color, the photograph, its outline can be traced off on ordinary white paper, and the colors applied to the white paper as above described. Then it is only necessary to place it on the mount behind the photograph, care being taken to render the latter transparent, and the two must be so placed that their outlines will agree. The effect obtained is the same, and gives very pretty results, not showing in the least how they are done.

4216. Transferring Photographs.

To transfer a print to wood, metal, glass, or even porcelain, it suffices to well clean the object, if it is already polished, and to polish it in the contrary case, and then to spread over the surface a light coating of copal varnish. Then apply the toned and fixed print, still wet, and with a squeegee or printer's roller drive away the air bubbles and excess of varnish; allow to dry for three or four hours. Then, rubbing gently with a slightly wet sponge, gradually remove the paper, the albumen film contains the image remaining attached to the glass by the varnish. A second coating of varnish will consolidate the whole. The only defect in this process is that it reverses the images. Those who operate on pellicle, or who practice phototype, and detach the gelatin pellicles, can make a reversed print, which, in this case, the process will correct. In this way it is possible to make very beautiful slides for the lantern, which are then to be painted for this particular application. Engravings may also be transferred in the same manner.

4217. Photographic Frost Pictures.

A very effective background may be imparted to photographic portraits by the following method: A concentrated solution of magnesium sulphate in beer is prepared, and the solution boiled down for a short time, in order to have the saccharine principle of the beer, which serves as a cement, slightly in excess. The preparation, if stored in a well-stoppered bottle, keeps well. The photograph is then treated in the following manner: The figure is masked in any convenient way, leaving the background open and the latter is quickly coated by means of a broad brush with the solution. It is well to apply it a little thicker around the shoulders, in order to produce there a more vigorous crystallization. After all has been coated, the picture—which may be printed on any kind of silvered paper—is laid aside. After about 10 minutes, the formation of crystals will be completed, and, at the same time, the

layer will be dry. The picture is then, by means of a pad of fine cotton, dusted with gilt bronze. If it is desired to strengthen some portions of the picture, it is only necessary to breathe upon them. Finally, the superfluous powder is dusted off, when the portrait will appear on a bronzed ground covered with frost-like crystals. To protect the picture from being injured, it is necessary to coat it with matt varnish. The gilt bronze may be replaced by any other suitable powder, and the crystallization may as well be applied to the film side of the negative instead of to the print. In this case the crystalline forms will appear lightly on a darker ground, which also gives a good effect.

4218. Microscopic Drawing.

Place the body of the microscope horizontal; remove the mirror; put the slide on the stage; condense the light upon it by means of the bull's eye, taking care to center the light; attach the concave mirror to the front of the eyepiece by means of a spring or a piece of thin wood. Have its surface at an angle of 45 degrees with the plane of the interior glass of the ocular. This will project an image of the object on the paper beneath. If the outer ring of light is circular, there will be no distortion. With a black cloth exclude all outer light, covering both your head and the instrument. You can draw any section easily in this manner, including magnifications of 600 diameters.

4219. Flash Light Powder.

Magnesium powder 6 ounces.

Potassium chlorate 12 ounces.

Antimony sulphide 2 ounces.

Mix them. Use from 75 to 150 grains of the mixture at a time.

4220. Flash Light Powder.

Fifteen grains of gun cotton and 30 grains of magnesium powder are used.

4221. Flash Light Powder.

Purchase 1 ounce magnesium powder and 1 ounce of negative gun cotton from dealers in photographic material, place on a dust pan enough cotton, when pulled out, to measure $3\frac{1}{2}$ inches in diameter. Sprinkle it over with 20 grains of magnesium powder to form a thin even film. Lay over the magnesium thus arranged a very thin layer of gun cotton. Connect to the bunch of cotton, a small fuse of twisted cotton about 6 inches long, so that it will extend to the side of the dust pan. Then set the pan on a step ladder near the object, and when ready, light the gun cotton fuse with a match, when instantly a brilliant flash will ensue.

4222. Flash Light Powder.

Magnesium, powdered 40 parts.
 Permanganate of potassium 40 parts.
 Peroxide of barium..... 20 parts.

4223. Flash Light Powder.

Chlorate potassium 20 parts.
 Aluminum powder 8 parts.
 Sugar 2 parts.

4224. Flash Light Powder.

Chlorate potassium 24 parts.
 Nitrate potassium 5 parts.
 Sulphide antimony 4 parts.
 Aluminum powder 10 parts.

4225. Flash Light Powder.

Chlorate potassium 25 parts.
 Yellow prussiate potassium.. 3 parts.
 Sugar 2 parts.
 Aluminium powder 10 parts.

4226. Flash Light Powder.

A sort of a capsule is made with 10 or 15 grains of gun cotton and in the interior of it is spread 7 grains of magnesium powder, well dried and passed through a sieve, or, for rapid exposures 15 grains of a mixture of 10 grains of dry magnesium and $7\frac{1}{2}$ grains each of chlorate and perchlorate of potassium. The capsule is then closed by joining the edges and, a clean copper wire being passed through it, it is suspended at the proper place. It now suffices to touch the cotton with anything in incandescence, held at the end of a long stick, to obtain a flash light of great power.

Duration of Combustion of Magnesium Flash Lights.

One gram (15.43 grains) compounded as follows, burns in 1-25th of a second and its graphic power compared to that of the decimal wax candle is 900,000.

Magnesium powder 1
 Potassium chlorate 7.5
 Potassium perchlorate 7.5

One gram of the following mixture burns in 1-20th of a second:

Potassium chlorate 6
 Magnesium dust 3
 Antimony sulphide 1

One gram of the mixture given below burns in 1-5th of a second:

Magnesium dust 37
 Potassium chlorate 63

4227. Flash Paper.

Carefully mix equal parts of nitric acid (1.42 specific gravity) and sulphuric acid (1.84 specific gravity). When the mixture has cooled to 70 degrees F., immerse in it white Japanese tissue filtering paper cut into strips $\frac{1}{2}$ inch wide and as long as desired. Cover the vessel with a glass plate and let

it stand for 12 to 16 hours. Remove the paper, wash in clear water, and dry as usual for gun cotton. When used, roll up a strip into a pellet and light one corner of it, throwing it into the air as you do so.

4228. Light in the Photographer's Dark Chamber.

The window of the dark chamber may be made of glass coated with the following composition:

Acetate of lead..... 10 parts.
 Water..... 100 parts.
 Gelatin, sufficient.

Dissolve, and add, with constant agitation:

Potassium chromate..... 6 parts.
 Potassium bichromate..... 4 parts.

4229. Light in the Photographer's Dark Chamber.

Dissolve 5 parts of carmine in 40 parts of water of ammonia. Mix water 450 parts, nitric acid 2 parts, glycerine 7 parts, and dissolve in the mixture 50 parts of gelatin; mix the two solutions and apply hot to the glass with a flat brush as many coats as may be required. The light is made more pleasant by covering the window with one or two thicknesses of thin yellow paper.

4230. Photographic Varnish.

Five parts of finely powdered sandarac are put into a vessel with 20 parts of absolute alcohol, and when the resin has been entirely dissolved by agitation, 2 parts of Venice turpentine are added. When this is dissolved, $1\frac{1}{2}$ parts of oil of lavender or turpentine, and $1\frac{1}{2}$ parts of powdered camphor are added, and when dissolved, filtered. If the varnish should not give the desired lustre, a further quantity ($\frac{1}{2}$ to 1 part) of sandarac may be added.

4231. Retouching Varnish for Photographers.

Ether 100 cubic cent.
 Shellac 1 gram.
 Sandarac 6 grams.
 Mastix 6 grams.

When solution is effected it is filtered, and 10 cubic centimeters benzol (not petroleum benzol) added. It affords a thin layer when poured cold upon the plates; if the grain is not fine enough, a little more benzol is added.

4232. Varnish for Photographic Prints.

Water 320 parts.
 White gum lac..... 32 parts.
 Borax..... 8 parts.
 Carbonate of soda..... 2 parts.
 Glycerine..... 2 parts.

Dissolve the borax and the carbonate of

soda in 160 parts of warm water, then add the gum lac in small pieces, and stir until complete solution. Now filter, and add the glycerine and 160 parts of water. After a few days a deposit is formed, which is separated either by decanting or filtering, and the varnish is ready for use. Apply with a short camel's hair brush, not too thickly, let dry spontaneously, the print in horizontal position.

A light varnish for lacquering negatives may be made by digesting on a sand bath until dissolved, dammar, 1 part, mastic $\frac{1}{2}$ part, sandarac $\frac{1}{4}$ part, chloroform and varnish oil each 1 part. Filter the varnish through clean cotton, and keep it in well closed bottles. It dries very easily.

4233. Ferro-Prussiate, or Blue Photographic Paper.

Prepare two solutions, one of ammonio-citrate (soluble citrate) of iron, 45 grains to the fluid ounce; the other of red prussiate (ferricyanide of potassium), 75 grains to the fluid ounce. Preserve the two solutions separate until required for use; then mix equal volumes and float on the surface of the mixture sheets of paper having a very smooth surface. Care should be taken that the whole surface is wetted. Dry the sensitized paper in a dark place. The prints are made by exposing the sensitive paper under a drawing made on translucent paper in an ordinary photographer's printing apparatus to a strong light a sufficient length of time, 10 to 30 minutes, according to the strength of the light and the transparency of the paper on which the drawing is made. Finally, fix the print by simply washing well with pure water. In a dry place the prepared paper may be kept for considerable time.

4234. Ferro-Prussiate, or Blue Photographic Paper.

This process, somewhat more troublesome, gives blue lines on a white ground, instead of white lines on a blue ground, as in the ordinary blue print. The sensitive paper is prepared by treating with a solution prepared by mixing the three following solutions: 1. Ferric chloride, $2\frac{1}{2}$ ounces; water, 5 ounces. 2. Acacia, 6 ounces; water, 28 ounces. 3. Ammonio-citrate of iron, 4 ounces; water, 10 ounces. This mixture must be used at once, as it spoils. The "printing" is done in the usual manner, but does not require as long exposure as the usual process. To develop the print, dip first in a saturated solution of ferricyanide of potassium, transfer to a bath of pure water, and thence to a mixture of hydrochloric acid 1 part, water 12 parts. Finally, wash well with pure water.

PYROTECHNICS.

The compounding of fire works is full of danger, a fact which should always be borne in mind by those handling them. The ingredients should be powdered separately and the mixing done with a wooden or bone spatula, on paper; or it may be done by sifting through a coarse sieve or mosquito netting; at all events the use of the mortar and pestle is extremely dangerous, and should never be resorted to in mixing the prepared constituents.

4235.

Rockets.

Sulphur	1 part.
Carbon, wood	2 parts.
Nitre	4 parts.
Meal powder	1 part.

Meal powder is a fine black or brown dust, which acts as a diluent.

4236.

Roman Candles.

Sulphur	4 parts.
Carbon	3 parts.
Nitre	8 parts.

4237.

Pin Wheels.

Sulphur	5 parts.
Nitre	9 parts.
Meal powder	15 parts.

Color as desired.

4238.

Bengal Lights.

Realgar	1 part.
Black antimony	5 parts.
Red lead	1 part.
Sulphur	3 parts.
Nitre	14 parts.

4239.

Colored Fires.

Sulfonal added to the preparations usually employed contributes wonderfully to their brilliancy. Mixed in equal parts with potassium chlorate an intensely brilliant white light may be obtained; 8 parts of this mixture with 1 part lithium carbonate gives a beautiful lilac.

4240.

Violet Fire.

Burn a powder composed of 8 parts metallic magnesium, 16 parts potassium permanganate, and 10 parts potassium bichromate.

4241.

Bengal Light Balls.

Collodion	100 parts.
Magnesium dust	1 to 10 parts.
Barium chloride, or	
Strontium nitrate	3 parts.

Mix the ingredients and after evaporation of the ether by exposure to air the residue may be pressed into balls for pyrotechnic use.

PREPARATIONS, LEATHER.

4243. Blacking for Boots and Shoes.

Take of Ivory black (In very fine powder) 2 pounds; molasses, 1½ pounds; sperm oil, ¼ pint; mix as before; then add of gum arabic, 1 ounce, dissolved in strong vinegar, ½ pint; mix well; the next day further add of good vinegar, or strong sour beer, 3 to 4 pints (or q. s.); stir briskly for a quarter of an hour, and again once a day for a week.

4244. Acid Free Blacking.

To a solution of casein in soda add ivory black, glucose, olive oil, and oleate of iron. A little soluble blue or Prussian blue dissolved with oxalic acid improves the color.

4245. Blacking for Boots and Shoes.

Four ounces Ivory black, 3 ounces coarse sugar, a tablespoonful of sweet oil, and 1 pint of weak beer, and mix them gradually together until cold.

4246. Bailey's Blacking Balls.

Bruised gum tragacanth.... 1 ounce.

Water 4 ounces.

Mix and add:

Neat's foot oil..... 2 ounces.

Fine ivory black..... 2 ounces.

Prussian blue 3 ounces.

Sugar candy 4 ounces.

Mix and evaporate to proper consistence.

4247. Oil Paste Shoe Blacking.

Molasses 1 pound.

Ivory black 1¼ pounds.

Sweet oil 2 ounces.

Rub together in a mortar till all the ingredients form a perfectly smooth homogeneous mixture, then add a little lemon juice or strong vinegar, say the juice of one lemon, or about a wineglass of strong vinegar, and thoroughly incorporate with just enough water added slowly to acquire the required consistency.

4248. Liquid Blacking.

Treacle 4 ounces.

Ivory black 4 ounces.

Rape oil 1 ounce.

Wood vinegar 24 ounces.

Vitriol 5 drams.

Mix as above.

4249. Liquid Blacking.

Treacle 4 ounces.

Ivory black 4 ounces.

Olive oil ½ ounce.

Powdered gum arabic..... 1 dram.

Powdered sulphate of iron. 1 dram.

Small beer 1½ pints.

Vitriol ½ ounce.

Mix as above.

4250. Liquid Blacking.

Treacle 8 ounces.

Ivory black 8 ounces.

Rape oil 1 ounce.

Powdered gum arabic..... ½ ounce.

Distilled vinegar 24 ounces.

Water 24 ounces.

Vitriol 1 ounce.

Mix all the ingredients except the vitriol with the vinegar, which add last.

4251. Liquid Blacking.

Ivory black 4 ounces.

Linseed oil 4½ pounds.

Treacle 4 ounces.

Copperas 4½ drams.

Vitriol 9½ drams.

Vinegar, quantity sufficient.

4252. Liquid Shoe Polish.

Caoutchouc 100 parts.

Petroleum 100 parts.

Carbon bisulphide 100 parts.

Shellac 400 parts.

Lampblack 200 parts.

Oil of lavender 10 parts.

Alcohol 2,000 parts.

Upon the caoutchouc in a bottle pour the carbon bisulphide, cork well and let it stand a few days, or until the caoutchouc has become thoroughly gelatinized or partly dissolved. Then add the petroleum, oil of lavender and alcohol, next the shellac in fine powder, and heat it to about 50 degrees C. (122 degrees F.) taking care that as little as possible is lost by evaporation. When the substances are all dissolved and the liquid is tolerably clear, add the lampblack, mix thoroughly and fill at once into small bottles.

4253. Liquid Shoe Polish.

Logwood extract, 3 ounces, dissolve in 2 quarts of water; borax, 3 ounces, dissolve in 2 quarts of water; and add ¾ ounce shellac, boil to dissolve; bichromate of potash ¼ ounce, dissolve in soft water, ¼ pint, and add 3 ounces ammonia water. Mix all together.

4254. Liquid Shoe Polish.

Alcohol 1 gallon.

White turpentine 1½ pounds.

Shellac 4 pounds.

Venice turpentine 4 ounces.

Sweet oil 4 ounces.

Lampblack 2 ounces.

Mix.

4255. Liquid Shoe Polish.

Aniline black 1 ounce.

Camphor 2 ounces.

Shellac 25 ounces.

Wood alcohol 73 ounces.

Dissolve.

4256. Ladies' Shoe Dressing.

Gluc, fine	4 ounces.
Indigo, powdered	2 drams.
Logwood chips	8 ounces.
Vinegar	32 ounces.
Soft water	16 ounces.
Glycerine	4 ounces.
Tragacanth	4 drams.
Potassium bichromate	4 drams.

After boiling together all the ingredients, with the exception of the potassium bichromate; the latter is dissolved in water and added to the strained decoction.

4257. Boot Polish.

Asphaltum	2½ pounds.
Spirits turpentine	8 ounces.
Double gold size	3 ounces.
Solution of India rubber..	¼ ounce.
Bolled linseed oil	3 ounces.
Vegetable black	1 dram.

Simmer together until dissolved.

4258. Dressing for Black Patent Leather Shoes.

Gum	8 ounces.
Treacle	2 ounces.
Ink	1 pint.
Vinegar	1 ounce.
Sweet oil	1 ounce.
Alcohol	2 ounces.
Lampblack	¼ ounce.

4259. Polish for Dress Boots.

Yellow soap.....	½ ounce.
Yellow wax.....	4½ ounces.
Bolling water.....	10 ounces.
Turpentine	10 ounces.

Melt the wax in the turpentine, dissolve the soap in the water. Mix in a hot mortar and stir till cold. By adding 1 ounce of extract of logwood brown, dissolved in the water, a good polish for brown leather boots results.

4260. Blacking for Kid Shoes.

Gum shellac, 2 ounces; aqua ammonia, 1 ounce; water, 8 ounces; black aniline, enough to color. Heat the ingredients slowly together (except the aniline) until the whole is nearly boiling and the shellac dissolves. It may be necessary to add a little more ammonia during the boiling. Then add the aniline and water (enough to make the whole measure 16 ounces).

4261. To Make Kid Leather Soft.

Wax	30 parts.
Asphaltum	10 parts.
Linseed oil	100 parts.
Oil of turpentine	50 parts.
Olive oil	100 parts.

The wax and asphaltum are dissolved in the oil of turpentine with the aid of heat. The linseed oil and olive oil are mixed, heated and added to the solution, and the mixture made homogeneous by stirring.

4262. Kid Reviver.

Yolk of 1 egg, 1 ounce of castor oil, 1 dram of turpentine, 2 drams of gum arabic, 3 ounces writing ink.

4263. Waterproofing Boots.

One part ozokerit in 2 parts castor oil, and 1 part lampblack added, makes an excellent application, as the boots will take a thin polish after. Or take salad oil 1 pint, mutton suet 4 ounces, white wax and spermaceti, of each 1 ounce. Melt together and apply to the boots warmed before the fire. The following is used by fishermen: Melt 3 ounces spermaceti and add ¾ ounce india rubber in thin shavings. When dissolved add ½ pound tallow, 2 ounces lard and 4 ounces amber varnish. Mix well, and while still warm apply with a brush, giving two or three coats. Preservative and waterproof.

4264. Waterproof Paste for Boots and Shoes.

Melt in an earthenware pot 6 parts spermaceti, add 12 parts of caoutchouc cut up very fine, and, when this is dissolved, further add 12 parts of tallow, 4 parts of lard, 8 parts of amber varnish. Mix, and it is ready for use, apply as ordinary with a brush. It gives a good gloss.

4265. Waterproof Shoe Soles.

To render shoe soles waterproof, prepare a 5 to 10 per cent. solution of gelatin, and mix this with 10 per cent. of saturated solution of potassium bichromate. This must be done with exclusion of light. Shoe soles painted with this solution and exposed to light will prove impenetrable to water.

4266. Leather Preservative.

Beeswax	18 parts.
Spermaceti	6 parts.
Oil turpentine	66 parts.
Asphalt varnish	5 parts.
Borax, powdered	1 part.
Vine twig black	5 parts.
Prussian blue	2 parts.
Nitrobenzol	1 part.

Melt the wax, add powdered borax, and stir till a kind of jelly has formed. In another pan melt spermaceti, add asphalt varnish, previously mixed with oil of turpentine, stir well, and add to the wax. Last, add the color, previously rubbed smooth with a little of the mass. Perfume with nitrobenzol and pour into boxes. Apply in small quantities, wipe with a cloth, and brush. Use only once a week.

4267. To Preserve Leather.

A solution of 1 ounce solid paraffine in 1 pint light naphtha, to which 6 drops sweet oil have been added, is put cold on the soles until they absorb no more. One

dressing will do for the uppers. This process vastly increases the tensile strength of every stitch; and, while, while not removing the natural moisture of the leather, decidedly waterproofs the boot. A sole lasts two months longer when so treated.

4268. Dressing for Tan Shoes.

Beeswax 1 part.
Oil of turpentine 4 parts.

4269. Russet Leather Shoe Dressing.

Annatto $\frac{1}{2}$ ounce.
Catechu 1 ounce.
Gamboge $\frac{1}{2}$ ounce.
Acacia $\frac{1}{2}$ ounce.
Hydrochloric acid 1 ounce.
Water to make 40 ounces.

Rub up the annatto and gamboge with the whole of the acid and a portion of the water, and add this to the remainder of the water previously mixed with the catechu and the gum acacia.

4270. Russet Leather Shoe Dressing.

Oil of turpentine 20 parts.
Yellow wax 9 parts.
Soap (ordinary bar)..... 1 part.
Boiling water 20 parts.

Dissolve the wax in the turpentine by the aid of the water-bath and the soap in the hot water. Mix in a hot mortar and agitate until cold.

4271. Russet Leather Shoe Dressing.

Palm oil 16 parts.
Common soap 48 parts.
Oleic acid 32 parts.
Glycerine 10 parts.
Tannic acid 1 part.

Melt the soap and palm oil together with a very gentle heat. When the soap is dissolved add the oleic acid. Dissolve the tannin in the glycerine, add to the hot mixture and stir until cold.

4272. Dressing for Brown Leather Shoes.

Yellow wax..... 4 ounces.
Pearl ash..... $\frac{1}{2}$ ounce.
Yellow soap..... $\frac{1}{4}$ ounce.
Water 12 ounces.

Scrape the wax small, and boil with these ingredients until a perfectly uniform cream is obtained; then remove from the fire and add:

Turpentine 8 ounces.
Phosphine (aniline).....
..... 4 grains to $\frac{1}{2}$ oz. spirit.

Shake until thoroughly combined, and make up to 24 ounces with water.

4273. Stain for Russet Leather.

Boil $\frac{1}{2}$ ounce of saffron and $\frac{1}{4}$ ounce of annatto in water until the dye is extracted. Then add sufficient alcohol to set the color.

4274. Stain for Russet Leather.

Boil a given amount of saffron in water until the color is extracted, cut a quantity of annatto in urine and mix the two together, the proportion of each determining the shade. The more annatto used the darker the shade.

4275. Stain for Russet Leather.

A stain may be made from saffron alone, by boiling a quantity in water until the coloring matter is exhausted, straining, and when cold adding alcohol enough to set the color. The shade may be varied by the addition of oxalic acid until the required tint it reached.

4276. Hardening Soles of Shoes.

If a pair of new shoes has the soles made warm by holding them near a fire or stove, and then varnishing them with copal varnish, drying them, warming, and applying a second or third coat, the leather will become waterproof, and very hard, lasting about twice as long as if not thus treated.

4277. Hardening Soles of Shoes.

Stockholm tar rubbed on the soles of shoes hardens the leather materially, renders it impervious to water, and makes it wear much longer than leather not thus treated.

4278. Carriage Top Dressing.

Carriage tops that have faded and become gray can be restored by washing with a solution composed of:

Nutgalls 4 ounces.
Logwood 1 ounce.
Copperas 1 ounce.
Clean iron filings..... 1 ounce.
Sumach berries..... 1 ounce.

Put all but the iron filings and copperas in 1 quart of the best white wine vinegar, and heat nearly to the boiling point; then add the copperas and iron filings. Let them stand for 24 hours, and strain off the liquid; apply with a sponge. This is equally good for restoring black cloths.

4279. Old, Faded and Cracked Carriage Tops.

The top should be washed with warm water and thoroughly dried; then with a sponge give one or two coats of the formula given as above, as may be required by the condition of the top. When dry, apply one coat of lampblack, using oil or varnish enough to give a gloss. Moss off when dry and give a coat of drop black mixed a little quicker than the first coat. Follow up with a little coach Japan in it.

4280. Enamel for Carriage Tops.

Asphaltum, 150 parts; boiled linseed oil, 3 parts; turpentine, 33 parts; benzine, 20 parts. Melt the asphaltum in the oil and add thinners.

4281. Restoring Enamel Leather Carriage Tops.

First, wash the top with soft water and castile or crown soap to remove dust, dirt, etc., using a sponge, and then scrub with a moderately stiff brush, cleanse with clean water and dry with chamois leather. Never apply any kind of oil or top dressing without first cleaning the leather.

4282. Harness Blacking.

Mutton suet..... 2 ounces.
Beeswax..... 6 ounces.
Melt and add
Sugar (in fine powder)..... 6 ounces.
Soft soap..... 2 ounces.
Lampblack 2½ ounces.
Indigo (in fine powder).... ½ ounce.

When thoroughly incorporated, add turpentine, 4 ounces, and pour into tins or other receptacles.

4283. Brown Harness Composition.

Yellow wax..... 5 ounces.
Turpentine 5 ounces.
Lard 4 ounces.

Melt wax, resin and lard together; remove from the fire, strain and add the turpentine, stirring constantly; then occasionally until the mixture is creamy; at this stage add a mixture of

Spirit varnish..... 4 drams.
Caramel 1 to 2 drams.

And stir until the composition sets. Aniline Bismarck brown may be used in place of the caramel, but it is apt to stain the leather more.

4284. Harness Jet.

Best glue..... 4 ounces.
Good vinegar..... 1½ pints.
Best gum arabic..... 2 ounces.
Good black ink..... ½ pint.
Best isinglass..... 2 drams.

Dissolve the gum in the ink, and melt the isinglass in another vessel in as much hot water as will cover it. Having first steeped the glue in the vinegar until soft, dissolve it completely by the aid of heat, stirring to prevent burning. The heat should not exceed 180 degrees F. Add the ink and gum and allow the mixture to again rise to the same temperature. Lastly, mix in the solution isinglass, and remove from the fire. When used, a small portion must be heated until fluid, and then applied with a sponge, and allowed to dry on.

4285. Blacking for Harness.

Isinglass or gelatin ¼ ounce.
Powdered indigo..... ¼ ounce.
Soft soap..... 4 ounces.
Logwood 4 ounces.
Glue 5 ounces.

Boil together in 2 pints of vinegar until the glue is dissolved; then strain through a cloth, and bottle for use.

4286. Blacking for Harness.

Melt 8 ounces of beeswax in an earthen pipkin, and stir into it 2 ounces of ivory black, 1 ounce of Prussian blue ground in oil, 1 ounce of oil of turpentine, and ¼ ounce of copal varnish. Make it into balls. To be applied with a brush and polished with an old handkerchief.

4287. Blacking for Harness.

Treacle ½ pound.
Lampblack 1 ounce.
Yeast 1 spoonful.
Sugar candy..... 1 ounce.
Olive oil..... 1 ounce.
Isinglass 1 ounce.
Gum tragacanth..... 1 ounce.
An ox gall.

Mix all together with 2 pints of stale beer, and let it stand before the fire for an hour.

4288. Harness Polish.

Laundry soap, shavings.. 300 parts.
Starch 150 parts.
Nutmeg, bruised..... 150 parts.
Green vitriol..... 150 parts.
Water 10,000 parts.
Boil together for one hour, filter and add
Animal charcoal..... 500 parts.
Extract logwood..... 100 parts.
Brown molasses 1,000 parts.
Carbolic acid..... 125 parts.

4289. Vaseline Harness Composition.

Prussian blue, in fine powder, ¾ ounce; lampblack, 4 ounces; molasses, 2 ounces; soft soap, 2 ounces. Mix together in a large mortar, previously warmed, and add: Vaseline, 6 ounces; ceresin, 5 ounces; yellow resin ½ ounce; melted together, then sufficient turpentine to give the composition the proper consistency. Mix thoroughly.

4290. Waterproof Harness Paste.

Put into a glazed vessel 2 ounces of black resin, which is melted over a fire. When dissolved add 3 ounces of beeswax, and when this is melted remove from the fire, then add ½ ounce of fine lampblack, ½ dram of Prussian blue in powder. These are stirred well together, and enough turpentine is added to form into a thin paste. Allow to cool, apply with a sponge, and finally polish with a soft brush.

4291. Varnish for Cleaning and Preserving Harness and Other Leather Goods.

Four ounces of shellac, half an ounce of camphor, and one ounce of resin are dissolved in one pint of methylated spirit and shaken at intervals for 48 hours. The mixture is then colored according to the kind of leather with which it is to be used. Other resins, solvents, and proportions may be adopted.

4292. Harness Varnish, or "Reviver."

Dissolve in about half a pint of methylated spirit two ounces of shellac, half an ounce of Venice turpentine, and one ounce of gum benzoin. Stir in a sufficiency of a mixture of four parts drop black, and one of indigo blue, to form a deeply colored varnish, then make up with spirit to the measure of one pint. Apply with a sponge or soft brush.

4293. Flexible Varnish for Leather.

Burnt umber 2 ounces.
Asphaltum 1 ounce.
Linseed oil 1 quart.

Dissolve the asphaltum with heat in a little of the oil, then add the umber ground in the oil; mix, add the rest of the oil; boil, and when cool, thin with turpentine.

4294. India Rubber Varnish for Boots.

Caoutchouc $\frac{1}{2}$ ounce.
Mineral naphtha 2 ounces.
Dissolve.
Asphaltine $\frac{1}{2}$ ounce.
Turpentine 1 ounce.
Dissolve.
Mix the solutions.

4295. Waterproof Varnish for Boots.

Ozokerite (hard paraffin).... 1 part.
Castor oil 2 parts.
Lampblack 1 part.
Mix.

4296. Waterproof Varnish for Boots.

Salad oil 1 pint.
Mutton suet 4 ounces.
White wax with spermaceti,
each 1 ounce.
Melt together and apply to the boots warmed.

4297. Waterproof Varnish for Boots.

Spermaceti 3 ounces.
Melt and add india rubber in thin shavings, $\frac{3}{4}$ ounce; when dissolved add tallow, 8 ounces; lard, 2 ounces; amber varnish, 4 ounces. Mix well, and while still warm apply with a brush.

4298. Leather Bronze.

Tannin 5 parts.
Alcohol 100 parts.
Gold bronze, real, enough.

Apply this mixture with a sponge.

4299. Bronzing for Leather.

A small amount of so-called insoluble (in water) aniline violet is dissolved in a little water, and the solution is brushed over the articles; it will dry quickly and perhaps will have to be repeated.

4300. Dressing for Leather Hose.

Melt together 1 gallon of neat's foot or castor oil (the "bottoms" will answer as well as the best) and 2 pounds of tallow, apply hot, using an ordinary paint brush for the purpose. The hose should be quite dry when this is done. The addition of a little carbolic acid or wood creosote to the above would probably answer as a protection against attacks of the rats, but these rodents are, like mortals, sometimes very queer in their tastes.

4301. White Polish for Leather.

Dissolve in 150 parts of alcohol 20 parts of resin, 10 parts Burgundy pitch, 25 parts of sandarac and 5 parts of white shellac. Apply with a soft brush. Pipe clay, chalk, or other pulverulent white material may be added, if thought needful.

4302. Paste for Leather Breeches.

Pipe clay 1 pound.
Spanish white $\frac{1}{2}$ pound.
Flake white 6 ounces.
Precipitated chalk 4 ounces.
Spermaceti 1 ounce.
Lard 8 ounces.

4303. White Finish for Shoes.

Best white glue..... 1 pound.
Sulphate of zinc..... $1\frac{1}{2}$ pounds.
Sulphate of copper..... 2 pounds.
Bolted pipe clay..... 1 pound.
Sulphate of magnesla.... 1 pound.
Light yellow ochre..... 2 ounces.
Water 4 gallons.

Mix and let stand until all is dissolved, then bring to the boiling point and add 2 pounds oxalic acid and tragacanth, quantity sufficient. Iron or gum brush in the usual way, and wax. If this is properly used, the red color will not work through.

4304. To Restore Leather Bags.

Wash over with a strong hot decoction of logwood, and if the color does not please, go over afterward with a solution of green copperas.

4305. Blackening for Leather Articles.

Boiling water 3 pounds.
 White wax ½ pound.
 Transparent gelatin..... 1 ounce.
 Gum senegal 2 ounces.
 White soap 1½ ounces.
 Brown sugar 2 ounces.

When the mixture is cold, 2½ ounces of alcohol and 3 ounces of Frankfort black are added. It is applied to the leather with a soft brush, and when dry the leather is rubbed with pumice stone and finely polished.

4306. Transparent Leather.

The cleansed skin is repeatedly coated with a mixture of 100 parts of glycerine, 0.2 of salicylic acid, 0.2 of picric acid, and 2.5 of borax; then nearly dried and impregnated in a dark room with a solution of bichromate of potassium; then completely dried and coated on both sides with shellac varnish.

4307. Leather, Black Lacquer for.

Red shellac 6 parts.
 Venice turpentine 1-5 part.
 Castor oil 1-5 part.
 Sandarac 1-5 part.
 Alcohol 30 parts.
 Nigrosine 1 part.

4308. Cheap Lacquer for Leather.

Black pitch 23 parts.
 Benzole 69 parts.
 Turpentine 8 parts.

Dissolve the pitch in the benzole, then add the turpentine.

4309. Leather, to Restore Softness.

To restore the softness and pliancy of leather which has become hard by having been wet, apply neat's foot oil and rub it in. Castor oil is a good substitute for neat's foot oil for softening leather belts, boots, and harness. Or use one quart neat's foot oil, 4 ounces beef's tallow, and 3 tablespoonfuls lampblack; add 4 ounces beeswax for use in summer weather.

4310. Blacking for Leather Seats.

Beat well the yolks of two eggs and the white of one; mix a tablespoonful of gin and a teaspoonful of sugar; thicken it with ivory black, add to it the eggs, and use as common blacking, the seats or cushions being left a day or two to harden. This may be used for dress boots and shoes.

4311. Furniture Leather Reviver.

Turpentine..... 6 ounces.
 Ammonia solution..... 1 ounce.
 One egg.

Mix and add water to 10 ounces.

4312. White Boot Top Liquid.

Oxalic acid and white vitriol, of each 1 ounce; water, 1½ pint; dissolve. It is applied with a sponge, the leather having been previously washed with water; after a short time it is washed off with water, when the boot tops are either dried in a current of air or by a gentle heat; they are lastly either polished with a brush, so as to appear like new leather, or they are left rough, as the case may require.

4313. White Boot Top Liquid.

Sour milk, 1 quart; butter of antimony, cream of tartar, tartaric acid and burnt alum, of each 2 ounces; mix.

4314. White Boot Top Liquid.

Sour milk (skimmed), 3 pints; cream of tartar, 2 ounces; alum and oxalic acid, of each, 1 ounce.

4315. White Boot Top Liquid.

Alum, cream of tartar, magnesia and oxalic acid, of each 1 ounce; salt of sorrel and sugar of lead, of each ¼ ounce; water, 1 quart.

4316. Brown Boot Top Liquid.

Alum, annatto and oxalic acid, of each 1 ounce; isinglass and sugar of lead, of each ½ ounce; salt of sorrel, ¼ ounce; water, 1 quart; boil for 10 minutes.

4317. Brown Boot Top Liquid.

Catechu 1 ounce.
 Gamboge ½ ounce.
 Acacia 3 drams.
 Annatto ½ ounce.
 Hydrochloric acid..... 1 ounce.
 Water, 2 pints.

4318. To Take Oil Out of Leather.

Use strong ammonia, which will take oil out without injury to the leather. It must be used two or three times in order to get all out. First use it and let the leather stand until more comes out, and apply again. This is the only thing that will take oil out and not hurt the leather.

4319. Tanning Skins for Mats or Robes.

Sheepskins: Wash while fresh in strong soap suds, first picking from the wool all the dirt which will come out. Paraffin, 1 tablespoonful to 3 gallons of water, will aid in removing the impurities. Continue to wash the skin in fresh suds until it is white and clean. Then dissolve ½ pound of salt and alum in 3 pints boiling water, put into it water enough to cover the skin, which should soak in the solution 12 hours and then be hung on a line to dry. Rub into the skin 1 ounce each of pulverized alum

and saltpetre, and if the skin is large, double the quantity. Rub them an hour or two. Fold the skin side out, and hang it away for 3 days, rubbing it every day or until perfectly dry. Then with a blunt knife clear the skin of impurities, rub it with a pumice or rotten stone and trim it into shape. If it is to be dyed, have a shallow vessel as large as the skin in which to prepare the dye, so that the skin can be laid down smoothly into the vessel, that all parts may be equally immersed in the dye. This should not be more than 1 inch deep, otherwise the skin might be injured by the heated dye. After coloring, again stretch the skin to dry, and then comb with a cotton card.

4320. Tanning Skins for Mats or Robes.

The following process has been devised to tan skins other than sheep, with the hair on: Stretch the skin tightly and smoothly upon a board, hair side down, and tack it by the edges to its place. Scratch off the loose flesh and fat with a blunt knife, and work in chalk freely with plenty of rubbing. When the chalk begins to powder and fall off, remove the skin from the board, rub in plenty of powdered alum, wrap up closely and keep in a dry place for a few days. By this means it will be made pliable, and will retain the hair.

4321. Tanning Skins for Mats or Robes.

Soft water..... 10 gallons.
Wheat bran..... $\frac{1}{2}$ bushel.
Salt..... 7 pounds.
Sulphuric acid..... $2\frac{1}{2}$ pounds.

Dissolve all together and place the skins in the solution, and allow them to remain 12 hours; immerse 12 hours, or longer if necessary. The skins may then be taken out, well washed and dried. They can be beaten soft if desired.

4322. To Dye Sheep Skins Brown.

Place the skins over night in water heated from 115 to 140 degrees F., and containing sufficient ammonia to make them smell of it. Take them out the next day and wash them. Now exhaust 2 pounds of logwood by boiling it several times, and dilute the liquor to 5 gallons. Place the skins in the bath for 3 hours, then take them out and let them drain off. Then place them in a bath of wood vinegar of 50 degrees B. for 1 hour, and move them occasionally. Take them out, rinse and dye them in a fresh bath heated to 140 degrees F. and containing $1\frac{3}{4}$ ounces of Bismarck brown; take them out, let the liquor drain off, rinse, and then dry the skins at a moderate heat and rather

slowly. It is best to lay the skins flesh side up on a board, as this will prevent shrinking. The skins, when dry, must undergo further treatment to render them soft and pliable. For this purpose mix bran to a homogeneous mass with tepid water, and to every $2\frac{1}{2}$ gallons add $3\frac{1}{2}$ ounces of glycerine of 28 degrees B. This mixture is applied to the skins, and when dry brushed off again. The yolks of 10 eggs, mixed with $1\frac{1}{2}$ gallons of water and $3\frac{1}{2}$ ounces of Epsom salts can be substituted for the bran.

4323. Black Cold Dye for Goat Skins.

Rub into the hair, with a brush, a solution of $\frac{1}{2}$ ounce nitrate of silver in 1 pint soft water, and hang in sun to dry. Afterward apply, in same day, a solution of 1 ounce sulphate of potash in 1 pint of water. Dry in sun; afterward rub off and dry in shade; work occasionally while drying. To intensify, apply a solution of pyrogallie acid before rinsing.

4324. Leather Working.

Formulas relating to the manufacture and uses of leather and leather articles are always in demand, and useful for the druggist to know as well as to have at hand. Indeed, the manufacture of leather is a very important industry, and in point of value and extent, its uses are only exceeded by those of cotton, wool and iron. Below are given various formulas used in and on leather, such as dyeing, gilding, restoring, cleansing, etc.

The following particulars are applicable to the processes used in dyeing leather by means of the various aniline colors. These dyes are particularly convenient, as the coloring can be effected without the aid of mordants:

Fine grain leather cannot stand treatment with alcoholic solutions, so that the aqueous dyes are preferable, and if alcoholic solutions have to be used they should be diluted to the verge of precipitation. Acid colors are more important than the basic. Tanned leather must generally be bleached by drawing it several times through a warm, strong sumach decoction, or leaving it immersed therein for several hours. Dyes which do not take uniformly on the leather must be mordanted; in nearly all cases they are best applied by painting them on. The most important of the saline mordants in this branch are the different soaps. A good, hard, white, soda soap is generally the best, Castile being recommended.

When the skin has been painted it is rinsed with cold water while upon the table and well stretched with a brass slicker; another coat of dye is applied, and again washed off with cold water; the skin is

then rubbed until the water runs off clean. Colors that require to be darkened are brushed over with a solution of Salzburg vitriol (ferrosocupric sulphate), a mixture of ferrous and cupric sulphates, 25.3 grams of which are dissolved in 3 litres of water. The skin is finally washed with clean water and dried.

4325. Dark Brown, for Leather.

Eight parts of fustic, 1 part of logwood, 2 parts of Brazil wood, 1 part of saunders, and $\frac{1}{2}$ part of quercitron are boiled with soft water for 1 hour, and strained through linen; the vitriol treatment serves to darken the shade; for light brown tints this is omitted and the skin is primed with dilute potash.

4326. Olive Brown, for Leather.

Two parts of Hungarian fustic, 1 part of quercitron, and $\frac{1}{4}$ part of logwood are boiled, and the solution applied upon a strong potash priming; vitriol treatment follows.

4327. Cutch Brown, for Leather.

A decoction of $\frac{1}{2}$ kilogram cutch, 60 grams of copper sulphate, and 40 litres of water is applied upon a feeble priming.

4328. Chestnut Brown, for Leather.

The moistened leather is primed with a solution of 1 kilogram of copper acetate in 50 litres of water, slicked out, and then painted with a solution of yellow prussiate of potash in feebly acid water.

4329. Chocolate Brown, for Leather.

Brazil wood ($1\frac{1}{2}$ parts) is boiled with water (45 parts) for 2 hours, and a little iron acetate added, according to shade.

4330. Red, for Leather.

Cochineal in a linen bag is boiled with water containing about 2 per cent of aqua ammonia.

4331. Alizarin Red, for Leather.

A feeble flesh color is produced by brushing the leather with a solution of alizarin in dilute soda, and then rinsing with soap-water.

4332. Scarlet, for Leather.

Zaffer extract, diluted with 60 parts of water containing 1 part of tartar, is painted on a feeble annatto bottom.

4333. Ordinary Red, for Leather.

A decoction of saunders wood is used upon a feeble priming of alum, free from iron.

4334. Dark Green, for Leather.

Quercitron (4 parts) and logwood (1 part) upon a strong priming of vitriol.

4335. Light Olive Green, for Leather.

A decoction of fustic (1 kilogram), archil ($1\frac{1}{4}$ kilogram), and water (2 litres) is painted on a light bottom of prussian blue. For picric green, an aqueous solution of picric acid is substituted for the fustic and archil.

4336. Lemon Yellow, for Leather.

Turmeric (1 part) is digested in alcohol (4 parts) for 24 hours, diluted with water, and applied upon a feeble potash bottom.

4337. Barberry Yellow, for Leather.

One kilogram of barberry root, 30 kilograms of water and 200 grams of iron free alum.

4338. Orange, for Leather Goods.

A red priming is given by Brazil wood, and fustic applied to impart the yellow. Seventy-five of the former to 25 of the latter produce a red orange, equal parts an ordinary orange, and 25 to 75 a yellow orange.

4339. Chrome Yellow, for Leather.

The dye is first applied with a solution of 30 grams red chromate of potash in $\frac{1}{2}$ litre of water, and is next fixed by 30 grams acetate of lead in $\frac{1}{2}$ litre of water.

4340. Black, for Leather.

Simple treatment with solution of iron sulphate or copperas will dye leather black. Acetate of iron may be used instead with advantage. The leather may be first mordanted with solution of logwood extract.

4341. Black, for Leather.

Dissolve $1\frac{3}{4}$ ounces solid extract logwood and $\frac{3}{8}$ ounce solid fustic extract in boiling water and make up to 35 fluid ounces. The leather, which must have been previously cleaned and stretched out, is brushed over five times at 100 degrees F.; 155 grains of chromate of potash and 77 grains of sulphate of copper are then dissolved in the same quantity of water; the leather is brushed twice with the solution, and then again with the decoction of logwood; 150 grains of liquid ammonia are then poured into 35 fluid ounces of water, and the leather is gone over with that. To make the leather supple, stir up 150 grains yolk of egg in 75 grains of glycerine, make it up with water to 35 fluid ounces, and rub the leather with it. Let it get half dry, and rub with a clean woolen rag.

4342. Blue Black, for Leather.

Beeswax	3 ounces.
Black resin	2 ounces.
Melt together, and then add:	
Prussian blue	1 ounce.
Lampblack	$\frac{1}{2}$ ounce.

While the mixture is cooling add turpentine till a suitable consistency is obtained. It should be applied with a soft rag, and the leather afterward polished with a brush.

PART VIII.

Paints, Varnishes, Floor Stains, etc.

PAINTS, VARNISHES, ETC.

4343. Tints and Colors for Paints.

Proportion of colors for ordinary paints:

Colors.	Ingredients by weight for 100 parts.						
	White Lead.	Lamp-black.	Red Lead.	Red Ochre.	Verdi-gris.	Burnt Umber.	Spanish Brown.
White	100
Black	100
Green	25	75
Stone	99	1
Lead	98	2
Red	50	50
Chocolate	4	96

Here is a list of compound colors, showing the simple colors which produce them:

- Buff—White, yellow ochre, red.
- Chestnut—Red, black, yellow.
- Chocolate—Raw umber, red, black.
- Claret—Red, umber, black.
- Copper—Red, yellow black.
- Dove—White, vermilion, blue, yellow.
- Drab—White, yellow ochre, red, black.
- Fawn—White, yellow, red.
- Flesh—White, yellow ochre, vermilion.
- Freestone—Red, black, yellow ochre, white.
- French Gray—White, Prussian blue, lake.
- Gray—White lead, black.
- Gold—White, stone ochre, red.
- Green Bronze—Chrome green, black, yellow.
- Green Pea—White, chrome green.
- Lemon—White, chrome yellow.
- Limestone—White, yellow ochre, black, red.
- Olive—Yellow, blue, black, white.
- Orange—Yellow, red.
- Peach—White, vermilion.
- Pearl—White, black, blue.
- Pink—White, vermilion, lake.
- Purple—Violet, with more red and white.
- Rose—White, madder lake.
- Sandstone—White, yellow ochre, black,

red.

Snuff—Yellow, Vandyke brown.

Violet—Red, blue, white.

In mixing different colored paints to produce any desired tint, it is best to have the principal ingredient thick and add to it the other paints thinner. In the above list the first named ingredient is the principal one, and the others follow in the order of their importance.

4344. Blackboard Slating.

- Shellac 4 ounces.
- Ivory black 2 ounces.
- Emery, in fine powder 1 ounce.
- Ultramarine 1 ounce.
- Methylated spirit 1 quart.

Mix and agitate occasionally until the shellac is dissolved.

4345. Blackboard Slating.

- Alcohol ½ gallon.
- Shellac ½ pound.
- Ether 2 ounces.
- Lampblack 4 ounces.
- Emery flour 2 ounces.
- Powdered pumice stone... 4 ounces.

4346. Blackboard Slating.

- Lampblack 1 ounce.
- Powdered pumice stone.... 4 ounces.
- Bolled linseed oil 8 ounces.
- Spirits turpentine, q. s..... 2 pints.

4347. Blackboard Slating.

Sodium silicate, diluted with water, and colored with lampblack, suspended in a little of the silicate, makes an excellent slating.

4348. Blackboard Slating.

To make 1 gallon of the paint for a blackboard, take 10 ounces pulverized and sifted pumice, 6 ounces powdered rotten stone (Infusorial silica), ¾ pound good lampblack, and alcohol enough to form with these a thick paste, which must be well rubbed and ground together. Then dissolve 14 ounces shellac in the remainder of the gallon of alcohol by digestion and agitation, and finally mix the varnish and their paste together. It is applied to the

board with a brush, care being taken to keep the paint well stirred, so that the pumice will not settle. Two coats are usually necessary; the first should be allowed to dry thoroughly before the second is put on, the latter being applied so as not to disturb or rub off any portion of the first. One gallon of this paint will ordinarily furnish two coats for 60 square yards of blackboard. When the paint is to be put on plastered walls, the wall should be previously coated with glue size—1 pound glue, 1 gallon water, enough lampblack to color; put on hot.

4349. Blackboard Slating.

Shellac 8 ounces.
Lampblack 1½ ounces.
Ultramarine blue ¾ ounces.
Powdered rotten stone... 4 ounces.
Powdered pumice stone.. 6 ounces.
Alcohol, 95 per cent..... 4 pints.

Dissolve the shellac in the alcohol, then add the other ingredients finely powdered, and shake well.

To apply the slating, have the surface of the board smooth and perfectly free from grease. Shake well the bottle containing the preparation, pour a small quantity into a dish, and apply with a new flat varnish brush as rapidly as possible. Shake before using and keep the bottle well corked.

4350. Blackboard Slating.

Shellac varnish ½ gallon.
Lampblack 5 ounces.
Emery flour 3 ounces.

Rub the lampblack with a little alcohol until thoroughly freed from lumps, then gradually work in the shellac varnish and emery flour. Wash the board free from all grease with solution of sal soda, and when dry apply the well mixed slating varnish with a good brush. It is best to thin the varnish with alcohol and apply two or three coats, being careful to allow each to dry before applying the next.

4351. Blackboard Slating (Bergmann's).

Prussian blue,
Chrome green,
Gilder's sizing,
Equal parts.
Alcohol, sufficient.

Mix the powders and add sufficient of the liquid to the consistency of cream. Use large, stiff brush; cover quickly. In an hour's time, give second coat. In a day or two, smooth the surface with a hair cloth.

4352. Blackboard Slating.

First, fill all cracks and holes and make the rough plaster smooth as possible with plaster of Paris, "wet up" with thin glue size. Next, sandpaper until the entire sur-

face feels smooth to the touch. Then glue size, and paper with good white blank or blank stock if handy to get. It improves the work to abut the edges. When dry, sandpaper lightly to take off any grains of sand or other thing which may be on or under the paper. If the wall has been calcimined, wash it and glue size. If it has been white-washed with lime or gypsum, sandpaper and glue size. To make the slating: Take dry lampblack, cut it down with turps, add oil and japan enough to bind it well, and make it dry hard quick. Run through the mill, and add fine emery flour in proportion of 2 ounces to the pound of dry lampblack. Thin with turps to the consistency of working carriage color, and lay on with a wide camel's hair brush. Sandpaper lightly after each coat except the last, which should dry with an egg-shell gloss only.

4353. Dissolvent for Paint Skins.

Two pounds concentrated lye, 5 pounds unslaked lime to 15 gallons water. Put in the old skins and all the dirty buckets; stir them up occasionally. When the skins are dissolved pour off the lye water, and the paint in the bottom will answer fairly well for rough weatherboarding, etc. Do not throw the water away, as it will do another time by adding more lye to it.

4354. To Soften Old Paint.

Sal soda..... 2 pounds.
Quick lime..... ¼ pound.
Warm water..... 1 gallon.

Stir well and apply hot or cold, and allow it to remain 15 or 20 minutes. Then scrape the paint off and wash thoroughly with acidulated water (vinegar and water), which is for the purpose of neutralizing the alkali and to stop its action upon the wood, and more still upon the repainting.

4355. Incombustible Paint.

Incombustible paint for rendering wood-work incombustible, is made by mixing pulverized glass, 20 parts; pulverized porcelain, 20; pulverized stone, 20; calcined lime, 10; silicate of soda, 30; total, 100 parts. The solid elements must be reduced to a fine powder, and then mixed intimately with the soluble glass, thus forming a glutinous mass, which may be employed as it is for painting, or may be mixed with various colors. The addition of the lime gives a certain unctuousity to the mass for painting, while the combining of this lime with the silicic acid of the soluble glass promotes the ultimate mixture of both the substances. Use a brush for the laying on of the paint in the usual manner, and do it as evenly as possible. The first coat sets immediately, and the second may be given 12 hours afterwards.

4356. Fireproof Paint.

Seventy pounds of zinc white, 30 pounds of air-slaked lime, 50 pounds of white lead, 10 pounds of sulphate of zinc. Mix the zinc white and lime together and grind in elastic oil, then add 1 gallon 35 degree water glass; then the white lead and sulphate of zinc. Stir well. This will make a white paint. If a shade is required, add the necessary color.

4357. Fireproof Paint.

Finely pulverized glass..... 20 parts.
 Finely pulverized porcelain. 20 parts.
 Any natural stone, finely powdered..... 20 parts.
 Burnt lime..... 10 parts.
 Soluble soda glass of about 42 or 36 per cent..... 30 parts.

The solid matters are pulverized as finely as possible, then mixed with water, and passed through a fine sieve. They are next well mixed, in a wet state, with the soluble glass, which gives a syrupy mass, which can be used in this condition or mixed with paint. The addition of lime gives a certain unctuosity for whitewashing. The proportion of the ingredients, except that of the soluble glass, may be changed; but it is always useful to retain the lime, and, in fact, the general composition as above. Soluble potash glass may be used instead of the soda, but it is more expensive. A second coating may be applied after 6 hours. This paint is as hard as stone, and gives complete protection against fire. It is recommended for railway carriages and boats, rendering the latter waterproof and doing away with tar. It sticks well on iron, and does not crack or blister like oil paints.

4358. Fireproof Paint for Smoke-Stacks.

Slake sufficient freshly burned quick lime of the best quality. When the slaking is complete, add sufficient skim milk, or water in its absence (though the first is preferable), to make a liquid of the consistency of cream. To every 10 gallons of this liquid add separately, and in powder, stirring constantly, the following ingredients in the order named: Alum, 2 pounds; subcarbonate of potassium (commercial potash will answer), 24 ounces; common salt, 1 pound. If white paint is desired, the liquid needs no further addition, though a few ounces of plaster of Paris will improve the whiteness. Lampblack will give a number of shades, from slate-colored to black. Whatever tint be used should now be incorporated, and the whole, after straining through a sieve, should be run through a paint mill. When ready to apply, the paint should be heated nearly to the boiling point of water, and

should be put on hot. Fine white sand added to this paint makes it a magnificent covering for roofs and for crumbling brick walls, which it will protect perfectly.

4359. Iron Paint.

The following is intended for painting damp walls, kettles, outer walls, or any place or vessel exposed to the action of the open air and weather. Should the article be exposed to frequent changes of temperature, linseed oil, varnish and amber should be mixed with the paint intended for the first two coats, without the addition of any artificial drying medium. The first coat should be applied rather thin, the second a little thicker, and the last in a rather fluid state. It is not necessary to free iron from rust, grease, etc., by means of acid before applying the paint, as a superficial cleaning is sufficient. The paint is equally adapted as a weather-proof coating for iron, wood and stone.

4360. To Make Paint Stick to Iron.

In order to prevent it from detaching itself in large flakes from iron surfaces, all that is necessary is first to wash the surface to be painted with soap and water, rinse, and let dry. When dry, go over it with a stiff brush dipped in hot linseed oil. When this becomes "tacky" the paint can be applied. If the object is small, and of such a nature that heating will not hurt it, raise the temperature until a drop of oil brought in contact with it "smokes." Go over the surface carefully with the raw oil, and let cool. It is now ready to receive the paint. With large objects that cannot be heated, the main point is to apply the oil as hot as possible, the nearer to boiling the better. Objects thus painted will preserve the coat of color for an indefinite period, the paint being unaffected by heat or cold, excessive moisture or excessive dryness. Wood exposed to the weather should be treated in the same manner.

4361. Paint for Linoleum.

If the linoleum be much worn paint it one or two coats with some desirable floor paint. For a varnish-like lustre the following may be employed, whereby the paint becomes even much more durable: Dissolve 2 parts of shellac in 8 parts of alcohol of about 80 per cent., and add to it $\frac{1}{4}$ of a part of camphor. When the whole has been completely dissolved it can be filtered or strained through a cloth to separate the suspended impurities. With this lac the floor is painted over once or twice as may be required. By the application of the lac, the paint adheres much better, and it is not so easily worn as though it were di-

rectly exposed; and when the lac has been partially removed, all that is necessary is to renew the simple application of the varnish.

4362. Luminous Paint.

Calcined oyster shells 100 parts.
Quicklime 100 parts.
Sulphur, fused 100 parts.
Calcined sea-salt 25 parts.

This mixture is carefully heated to redness in a covered crucible, and constitutes, when cold, the carrier of light.

4363. Blue Luminous Paint.

Forty-two parts varnish, 10.2 parts prepared barium sulphate, 6.4 parts ultramarine blue, 5.4 parts cobalt blue and 46 parts luminous calcium sulphide.

4364. Gray Luminous Paint.

Forty-five parts of varnish are mixed with 6 parts prepared barium sulphate, 6 parts prepared calcium carbonate, 0.5 parts ultramarine blue, 6.5 parts gray zinc sulphide.

4365. Green Luminous Paint.

Forty-eight parts varnish are mixed with 10 parts prepared barium sulphate, 8 parts chromium oxide green, and 34 parts luminous calcium sulphide.

4366. Orange Luminous Paint.

Forty-six parts varnish are mixed with 17.5 parts prepared barium sulphate, 1 part Indian yellow, 1.5 parts prepared madder lake, and 38 parts luminous calcium sulphide.

4367. Red Luminous Paint.

Sixty parts varnish are mixed with 8 parts prepared barium sulphate, 2 parts prepared madder lake, 6 parts prepared realgar (red arsenic sulphide) and 30 parts luminous calcium sulphide, and treated the same as for white paint.

4368. Violet Luminous Paint.

Forty-two parts varnish, 10.2 parts prepared barium sulphate, 2.8 parts ultramarine violet, 9 parts cobaltous arsenate, and 36 parts luminous calcium sulphide.

4369. Yellow Luminous Paint.

Forty-eight parts varnish are mixed with 10 parts prepared barium sulphate, 8 parts barium chromate, and 34 parts luminous calcium sulphide.

4370. Paint for Shingle Roofs.

There is a paint made for shingle roofs of which the principal ingredients are coal tar, gypsum, benzine, and coloring; it is applied cold and dries quickly. One barrel coal tar, 10 pounds asphaltum, 10 pounds ground slate, 2 gallons dead oil. Add the dead oil after the others have been mixed by aid of heat.

4371. Paint for Sample Stoves.

Paint the stove with paint made of powdered black lead and linseed oil, and polish in the ordinary way when dry. It may be left out in all kinds of weather without injury to the polish.

4372. Stencil Paints.

Shellac, 2 ounces; borax, 2 ounces; water, 25 ounces; gum arabic, 2 ounces; lampblack, a sufficiency. Boil the borax and shellac in water till they have dissolved, and withdraw from the fire. When the solution has become cold, complete 25 ounces with water, and add lampblack enough to bring the preparation to a suitable consistence. When it is to be used with a stencil, it must be made thicker than when it is to be applied with a marking brush. The above gives a black ink. For red, substitute Venetian red for lampblack; for blue, ultramarine; and for green, a mixture of ultramarine and chrome yellow.

4373. Paint for Damp Walls.

Linseed oil, boiled..... 5 parts.
Turpentine 5 parts.
Resin 5 parts.
Chalk 15 parts.
Use as paint.

4374. Bookbinders' Lac.

Shellac, in scales..... 100
Benzoin 25
Sandarac 25
Mastic 25
Pulverize, and pour on:
Alcohol 500
Oil lavender..... 5

4375. Bookbinders' Lac, Colored.

Sandarac 100
Mastic 50
Venice turpentine..... 40
Alcohol 500

Pigment, q. s.

Dissolve and filter.

(Dragon's blood, annatto, gamboge, fuchsin, or any of the aniline pigments, may be used.)

4376. Colorless Bookbinders' Lac.

White shellac..... 100
Pulverize, and moisten with:

Ether 30

Set aside until the mass has swelled.

Then add:

Powdered mastic..... 50
Absolute alcohol..... 300
Oil lavender..... 20

Set the mixture aside for several days, frequently agitating, then put in a cold place to allow the solution to settle. Decant and strain through a linen strainer.

4377. Black Enamel for Bicycles.

Dissolve in about 2 pounds of tar oil $\frac{1}{2}$ pound of asphaltum and a like quantity of pounded resin; mix hot in an iron kettle, care being taken to prevent any contact with the flame. When cold the varnish is ready for use. Apply with a common brush.

LACQUERS, ETC.

4378. Lacquer for Brass.

Turmeric	1 ounce.
Annatto	$\frac{1}{4}$ ounce.
Spanish saffron.....	$\frac{1}{4}$ ounce.
Shellac	3 ounces.
Alcohol	16 ounces.

Digest the first three ingredients with the alcohol for 24 hours, then dissolve the shellac in the liquid.

4379. Black Coating for Brass Objects.

Dissolve 1.05 ounces carbonate of copper, while being well stirred in 8.80 ounces of spirits of ammoniac, 17.60 ounces of water being added to the solution. The brass objects should have been well polished with emery paper, and are fastened to brass or copper wires. They are plunged for a short time in the solution, and when completely blackened are rinsed in water. They are then dried in sawdust, and finally rubbed with oil varnish diluted with oil of turpentine. This black coating is said to be durable, and to stand exposure in the open air.

4380. Bronzing Fluid.

Red aniline.....	50 grains.
Violet aniline.....	50 grains.
Alcohol	2 ounces.
Benzole acid.....	50 grains.

Dissolve the aniline in the alcohol, in a bottle, by the aid of a water-bath, add the benzole acid, boil in the water-bath 5 or 10 minutes, until the greenish color of the liquid has changed to a light brownish bronze. This is applied to metal, leather, wood or other surfaces.

4381. Brown Bronzing Liquid for Copper and Brass.

Copper acetate.....	$5\frac{1}{2}$ parts.
Ammonium chloride.....	7 parts.
Acetic acid.....	1 part.
Water.....	100 parts.

The articles, having been previously heated, are coated repeatedly until the desired color is obtained.

4382. Gold Bronze.

Melt 2 parts of pure tin in a crucible, and add to it, under constant stirring, 1 part of metallic mercury, previously heated in an

iron spoon until it begins to emit fumes. When cold, the alloy is rubbed to powder, mixed with 1 part each of chloride of ammonium and sublimed sulphur, and the whole inclosed in a flask or retort, which is embedded in a sand-bath. Heat is now applied until the sand becomes red-hot, and this is maintained until vapors are no longer evolved. The vessel is then removed from the hot sand and allowed to cool. The lower part of the vessel contains the gold bronze as a shining gold-colored mass. In the upper part of the flask or retort will be found chloride of ammonium and cinabar.

4383. Bronzing Gun Barrels.

The barrels and bodies are first scalded in a solution of soda for twenty minutes, and then washed in clean water. The following browning-mixture is then applied:

Spirits of wine.....	5 ounces.
Spirits of niter.....	8 ounces.
Tincture of steel.....	8 ounces.
Nitric acid.....	4 ounces.
Sulphuric acid.....	3 ounces.
Blue vitriol.....	4 ounces.
Water	1 gallon.

The guns are then placed in a damp heat for about $1\frac{1}{2}$ hours, when they are scalded again, and when cool the rust is scratched off. This process is repeated four times, and then the barrels are cleaned and oiled. The whole operation occupies about eight hours.

4384. Gilding, to Improve.

Powdered alum.....	1 ounce.
Common salt.....	1 ounce.
Powdered saltpeter.....	2 ounces.
Distilled water.....	4 ounces.

This much improves the color of gilt articles. To be used with a soft brush.

4385. Colorless Lacquer.

Dissolve $2\frac{1}{2}$ ounces of shellac in 1 pint of alcohol, boil for a few minutes with 5 ounces of well burned and recently heated charcoal. A small portion of the solution should then be filtered and, if not colorless, more charcoal should be added. When all color is removed, press the liquid through a piece of silk, and filter through paper.

4386. Enamel for Carriage Tops.

Asphaltum	150 parts.
Boiled oil.....	3 parts.
Turpentine	33 parts.
Benzine	20 parts.

Melt the asphaltum in the oil and add thinners.

4387. Lacquer for Engravings.

A varnish much employed for that purpose in Paris, consists of a solution of 2 parts damar resin in 5 parts turpentine. The mixture should be well shaken before it is applied.

4388. Zinc Coating for Enamel Painting.

For coating zinc with a fine black surface on which enamel paintings may be executed, use the following: First, roughen the surface by rubbing with fine white sand. Prepare a bath of sixty-four parts of distilled water, two parts of nitrate of copper, three of crystallized chloride of copper, and eight of hydrochloric acid. Plunge the plate of zinc into the bath and let it remain a few seconds; then wash in water and dry rapidly. The black surface that forms resists nitric acid, so that if a design is made upon zinc with the above liquid the plate can be etched, having the design in relief.

4389. Gold Lacquer.

Seed lac.....	3 ounces.
Turmeric	1 ounce.
Dragon's blood.....	$\frac{1}{4}$ ounce.
Alcohol	1 pint.

4390. Gold Lacquer.

Ground turmeric.....	1 pound.
Gamboge	$1\frac{1}{2}$ ounces.
Gum sandarac.....	$3\frac{1}{2}$ ounces.
Shellac, powdered.....	$\frac{3}{4}$ pound.
Alcohol	2 gallons.
Turpentine varnish.....	1 pint.

Digest for a week, frequently shaking the mixture; then decant and filter.

4391. Gold Lacquer.

Gamboge	1 ounce.
Cape aloes.....	3 ounces.
Pale shellac.....	1 pound.
Alcohol	2 gallons.

4392. Lacquer for Harness.

Shellac, in scales.....	100.0
Sandarac	20.0
Venice turpentine.....	30.0
Gurjun balsam.....	30.0
Oil turpentine.....	10.0
Alcohol	400.0
Set aside for several days; then add	
Lampblack	10.0
Alcohol	50.0

4393. Tar Asphalt Lacquer for Iron.

Thirty parts of West Indian copal, 30 parts of American pine resin, 30 parts of mineral asphalt, 30 parts of tar asphalt, 5 parts yellow wax, and 6 parts of Venetian turpentine. These ingredients are melted and uniformly mixed by stirring. If the

mixing is properly done the melted compound runs off the spatula in a cohesive, uniform, thick stream. The following are then added to the substance while it is still moderately warm: 12 parts of resin oil, 30 parts of linseed oil varnish, 30 parts of turpentine oil, and, finally, from 30 to 45 parts of benzine. If it be desired to make the lacquer thin fluid, the quantity of benzine is increased. Painting must be several times renewed, the more often the finer the appearance.

4394. Holland Lacquer.

Sandarac	100.0
Mastic	100.0
Amber	100.0
Finely pulverize, and add	
Dried silicious sand.....	100.0
Venice turpentine.....	75.0
Linseed oil.....	100.0
Oil turpentine.....	400.0

Allow to stand eight days in a warm place, frequently agitating. Set aside and either filter or decant the supernatant liquid.

4395. Black Lacquer for Leather.

Dissolve	
Best shellac.....	40 grams.
Sandarac.....	10 grams.
Mastic	5 grams.

In $\frac{1}{2}$ liter methylated spirit, and add 20 to 30 grams pure Venetian turpentine. The solution is colored a deep black by adding nigrosin.

4396. White Lacquer.

Bleached shellac.....	60 parts.
Manilla copal, freshly powdered	60 parts.
Mastic	60 parts.
Spirit	1,000 parts.

Digest with frequent agitation (adding 100 parts of powdered glass to aid solution) for a fortnight; then add 1 part of boracic acid, and filter.

STAINS FOR WOOD.

4397. Cheap Black Stain.

Take dry lampblack, break up with benzine to consistency of mush, add boiled milk and japan in equal parts sufficient to bind the paint. Stir well and put in soluble glass in proportion of 1 ounce to the quart. Stir again, and thin with water until it works well. It should work on dry muslin without crawling or spreading, and flow on an old unplanned board as easily as water. If the paint spreads at the edges, use more japan and less oil. Muslin painted with this mixture will remain pliable, and will neither rot nor break.

4398. Extra Black Stain for Wood.

Pour 2 quarts of boiling water over 1 ounce of powdered extract of logwood, and when solution is effected 1 dram of yellow chromate of potash is added, and the whole well stirred. It is then ready for use as a wood stain, or for writing ink. When rubbed on wood it produces a pure black. Repeat with two, three or four applications till a deep black is produced.

4399. Black Walnut Stain.

Logwood chips 1 pound.
Red saunders..... ½ pound.
Water ½ gallon.

Boil over a fire until the full strength is obtained. Apply the mixture, while hot, to the wood with a brush. One or two coats is sufficient to obtain a strong red color. Then take 1 gallon spirits turpentine and 2 pounds of asphaltum. Dissolve in an iron kettle on a stove, stirring constantly. Apply with a brush over the red stain to imitate rosewood. To make a perfect black, add a little lampblack. The addition of a small quantity of varnish with the turpentine will improve it. This stain, applied to birchwood, gives as good an imitation of rosewood as on black walnut, the shade on the birch being a little brighter.

4400. Blue Stain for Wood.

Boil 1 pound of indigo, 2 pounds of logwood, and 3 ounces of alum in a gallon of water. Brush well over until thoroughly stained.

4401. Green Stain for Wood.

Dissolve verdigris in vinegar and brush over with a hot solution until of a proper color.

4402. Blue Stain for Wood.

Dissolve copper filings in aqua fortis. Brush the wood with it, and then go over the work with a hot solution of pearl ash (2 ounces to 1 pint of water) till it assumes a perfectly blue color.

4403. To Stain Bricks Red.

Melt 1 ounce of glue in a gallon of water; then add a piece of alum as large as an egg, ½ pound of Venetian red, and 1 pound of Spanish brown. The redness or darkness is increased by using more red or brown. For coloring black, heat the bricks and dip in fluid asphaltum, or in hot linseed oil and asphalt.

4404. Brown Stain for Wood.

To obtain imitation of oak, walnut and cherry tree wood, thin ordinary tincture of iodine with alcohol, more or less of the latter being used according to the shade

of brown desired. The stain should be applied with a broad brush or a rag. After it has dried, the work should be polished. The ordinary French polish may be dispensed with by adding white shellac to the stain.

4405. Cherry Stain for Wood.

Rain water 3 quarts.
Annatto 4 ounces.

Boil in a copper kettle until the annatto is dissolved, then put in a piece of potash the size of a walnut. Keep the mixture over the fire for half an hour longer, when it may be bottled for use.

4406. Cherry Stain for Pine or Whitewood.

Mix in a bottle 15 grains alkanet root, 30 grains aloes, 30 grains powdered dragon's blood, and 500 grains 90 per cent alcohol; cover with a bladder tied tightly over mouth, and shake it occasionally. In 3 or 4 days it can be filtered, and will be ready for use. Mordant the wood with dilute nitric acid, allow it to dry, and then apply the stain. Try some pieces of wood first to see if it answers the purpose.

4407. Crimson Stain.

Ground Brazil wood..... 1 pound.
Water 3 pints.
Cochineal ½ ounce.

Boil the Brazil wood with water for about an hour, strain, and add the cochineal, boil gently for half an hour, when it will be fit for use. This is first applied, and then the varnish, consisting of:

Alcohol ½ gallon.
Gum sandarac 6 ounces.
Gum mastic 3 ounces.
Turpentine varnish ½ pint.

Put the above in a tin can by the stove, frequently shaking, strain and keep for use. If it is too hard, thin with more turpentine varnish.

4408. Stain for Inside of Drawers.

Alcohol 2 pints.
Powdered gamboge 3 ounces.
Ground turmeric 6 ounces.

Steep to obtain full strength, and strain through muslin. Apply two coats with a fine sponge, sand paper when dry, and varnish or French polish.

4409. Floor Stain for Soft Wood.

Glue 500 parts.
Water 5,000 parts.
Potassium bichromate 15 parts.
Anilin brown, water-soluble 50 parts.

Dissolve the glue in the water by the aid of heat; add the other ingredients and apply lukewarm.

4410. Oak Stain.

Mix powdered ochre, Venetian red, and umber, in size, in proportions to suit; or richer stain may be made with raw sienna, burnt sienna and Vandyke brown. A light yellow stain of raw sienna is very effective. Coffee is sometimes used to darken oak. If a very dark shade is desired, put on iron filings with a little sulphuric acid with a sponge, and allow to dry after each application.

4411. Black Stain for Oak.

Immerse the wood for forty-eight hours in a hot saturated solution of alum, and then brush it over with a logwood decoction, as follows: Boil one part of the best logwood with 10 parts of water; filter through linen, and evaporate at a gentle heat until the volume is reduced one-half. To every quart of this add from 10 to 15 drops of a saturated solution of indigo. After applying this dye to the wood, rub the latter with a saturated and filtered solution of verdigris in hot concentrated acetic acid, and repeat the operation until a black of the desired intensity is obtained.

4412. Staining Pine.

The following is a recipe for staining pine, ebony or black, a black that acids will not discolor. Boil 40 parts gall nuts, 4 parts rasped logwood, 5 parts sulphate of iron and 5 parts verdigris with water. Strain through linen and apply the warm fluid to the wood, and give it 3 coats of a warm solution of 10 parts of iron filings in 75 parts vinegar. To prevent discoloration of the stained wood by acids, polish the surface with paraffin.

4413. Purple Stain.

Logwood chips 1 pound.
Water $\frac{3}{4}$ gallon.
Pearlash 4 ounces.
Powdered indigo 2 ounces.

Boil the logwood in the water till the full strength is obtained, then add the pearlash and indigo, and when the ingredients are dissolved, the mixture is ready for use, either warm or cold. This preparation gives a beautiful purple tint.

4414. To Stain Marble.

Marble may be stained different colors by using the following substances: Blue, solution of litmus; green, wax colored with verdigris; yellow, tincture of gamboge or turmeric; red, tincture of alkanet or dragon's blood; crimson, alkanet in turpentine; brown, tincture of logwood; gold, equal parts of verdigris, sal ammoniac and zinc sulphate in fine powder. The marble should

be not quite polished, but made perfectly smooth, and ready to receive the highest finish before the stain is applied. The longer the stain is left in contact, the better the result.

4415. To Kill Grease Spots.

Before painting, wash the parts with salt-petre, or very thin lime whitewash. If soap suds are used they must be washed off thoroughly, as they prevent the paint from drying hard.

4416. Protect Polished Metallic Surfaces.

A protective ointment for polished steel knives, or other polished surfaces, is prepared by melting together the following:

Resin..... 35 parts.
Talc, in powder..... 500 parts.
Lard 250 parts.
Yellow wax..... 130 parts.
Olive oil..... 130 parts.
Oil of turpentine..... 130 parts.

Mix the resin, lard, wax and oil, and melt at a low temperature. When melted, stir in the talc, and, after removing from the fire, add the turpentine, with constant stirring.

4417. To Protect Stovepipe.

Asphaltum 2 pounds.
Boiled linseed oil..... 1 pint.
Oil of turpentine..... 2 quarts.

Fuse the asphaltum in an iron pot, boil the linseed oil, and add while hot. Stir well and remove from the fire. When partially cooled add the oil of turpentine.

4418. Gold Luster for China Painting.

Dissolve 1 dram gold in $\frac{3}{4}$ ounce aqua regia, or simply dissolve this weight of chloride of gold in water. Add 6 grains metallic tin, and enough aqua regia, if required, to dissolve it. Pour, with constant stirring into a mixture of $\frac{1}{2}$ dram balsam of sulphur and 20 grains oil of turpentine. As it stiffens, add $\frac{1}{2}$ dram oil of turpentine and mix. More gold gives a brighter effect; tin inclines it to a violet tinge. Balsam of sulphur is made by boiling together in a covered vessel 1 part flowers of sulphur and 4 parts oil until the mass thickens.

4419. Putty for Polished Wood.

Melt a small quantity of beeswax, and while in a liquid form mix with whiting; as it becomes thick, add boiled oil until it is of the desired consistency. In using, sheet the wood over solid. Let it stand until the next day, when it can be removed by using sandpaper. It is cheaper and easier than shellac, and can be levelled

much sooner, leaving nothing but the pores of the wood filled, which is better than having the wood all stained with the shellac.

4420. To Soften Hard Putty.

Take 1 pound of pearl ash and 3 pounds of quick lime; slake the lime in water, then add the pearl ash, and make the whole about the consistency of paint. Apply to the putty and let it remain for 12 hours, when the putty will be so softened that the glass may be readily removed.

4421. To Soften Hard Putty.

Apply heat. An old, flat file, or, better still, a soldering iron, made red hot and passed over the putty softens it at once, so that the broken glass may be removed and the putty scraped away with the fingers or an old case knife.

4422. Varnish Brushes.

Should the varnish brush drop to the floor or become soiled, clean out well in varnish. Fill with varnish and place in the keeper, and in time the dust will settle to the bottom. By cleaning with turpentine, which is very volatile, the dust and dirt are drawn up to the tin of the brush, and will work out when used again.

4423. To Prevent Paint Brushes From Freezing.

Add a little glycerine to the water in which the brushes are suspended, which will prevent freezing, and also prevent the paint from drying if not well washed from the brush before using.

4424. To Renovate Gilt Frames.

Apply with a camel's hair brush a gum arabic solution to which has been added a gold bronze having the color of the frame. Before mixing with the gum water, the bronze must be washed with water until it runs off perfectly clear. If one application does not suffice, it may be repeated until the spot entirely disappears. One coat must dry before the other is applied.

4425. Simple Dead Finish.

The following is a simple, but not very solid, dead finish for walnut: Take equal parts of burnt umber and finely ground pumice stone; mix them together. Apply with a woolen rag or haircloth dipped in raw or boiled linseed oil. Clean with soft old cotton rags. The longer and harder the rubbing, the better the results. You need not fill or oil the walnut.

4426. Waterproof Liquid.

India rubber, in fragments, 1 ounce; boiled oil, 1 pint; dissolve by heat, carefully applied, then stir in of hot boiled oil 1 pint, and remove the vessel from the fire.

4427. Waterproof Liquid.

Boiled oil, 1 pint; beeswax and yellow resin, of each 2 ounces. Melt them together.

4428. Waterproof Liquid.

Salad oil, 1 pint; mutton suet, $\frac{1}{4}$ pound; white wax and spermaceti, of each 1 ounce.

4429. Waterproof Liquid.

Bisulphide of carbon, 2 ounces; gutta percha, $\frac{1}{2}$ ounce; asphaltum, 2 ounces; brown amber, $\frac{1}{2}$ ounce; linseed oil, 1 ounce. Mix. Dissolve the gutta percha in the bisulphide of carbon, the asphalt and amber in the oil, and mix well.

4430. India Rubber Varnish.

The scraps of vulcanized rubber, which is a mixture of rubber and sulphur, and which dealers in hard rubber goods can deliver in abundance, can furnish by using the following method an excellent varnish, which dries promptly: Its color can be varied from a golden yellow to the deepest brown. It sticks very well to metals, and can be employed on electric apparatus. These clippings are put into a deep earthen pot, covered with a light lid. The pot is set upon hot coals. At the end of five minutes remove the pot from the fire and see if the material is melted. While the pot is on the fire take care not to lift the lid, because the vapors which would be thrown off take fire easily. After the rubber is all melted so that it can be poured out, and there are no more whole pieces, which can be discovered by fumbling though the mass with a large file, pour it into a flat tin basin. This basin should be rubbed with grease beforehand, and after the mass is cooled it is readily detached. Then break it into pieces, put it into a large bottle, pour on some benzol and rectified spirits of turpentine, and shake the mixture up several times. The solution being complete, pour out the liquor to get rid of the impurities, some hardened rubber which remains at the bottom, and a very limpid, beautiful and excellent varnish is obtained.

4431. Kalsomining Fluid for Walls.

White glue 1 pound.
White zinc 10 pounds.
Paris white 5 pounds.
Water, sufficient.

Soak the glue over night in 3 quarts of water, then add as much water again, and heat on a water-bath until the glue is dissolved. In another pail put the two powders and put on hot water, straining all the time, until the liquid appears like thick milk. Mingle the two liquids together, stir thoroughly, and apply to the wall with a whitewash brush.

4432. Whitewash.

Lime, clean and well burnt	6 quarts.
Spanish whiting, or powdered burnt alum	4 ounces.
White sugar	16 ounces.
Rice flour	3 pint.
Glue, of good quality.....	16 ounces.
Water, boiling	5 gallons.

Slake the lime in a vessel of about 10 gallons' capacity, with hot water, keeping the vessel covered to retain the steam, and pass through a sieve to clear of coarse particles. Make up the rice flour to a thick paste and boil well, and dissolve the glue in water over a water-bath; then mix the liquids with the remainder of the water, and add the whiting or alum and sugar.

The mixture should be applied warm to outdoor surfaces, and cold indoors. It is stated that a coating of this wash will retain its brilliancy for many years.

4433. Whitewash, Waterproof.

Mix 3 parts of pulverized silicious rock (quartz), 3 parts coarsely powdered marble, or 3 parts coarsely powdered sandstone, 2 parts burned kaolin, or fire clay, and 2 parts of freshly burned lime, still warm. Repeated wettings of this mixture form a silicate which becomes, if allowed to dry and solidify, like a stone. The four constituents mixed together give the ground color, to which any pigment (that can be used with lime) is added. It is applied quite thickly to the wall, or other surface. Let dry one day and the next day frequently cover with water, which makes it water-proof. This wash can be cleansed with water without losing any of its color; on the contrary, each time it gets harder, so that it can even be brushed, while its porosity makes it look soft. The wash, or calcimine, can be used for ordinary purposes as well as for the finest painting. A so-called fresco surface can be prepared with it in the dry way.

4434. Coating for Laboratory Floors.

Heat together in a metal pot 4 parts chalk, 50 parts resin, 4 parts linseed oil, and 1 part native cuprous oxide; then stir in carefully 1 part sulphuric acid. A sort of mastic results, which may be applied hot, and when dry forms a varnish of stony hardness. It is as good as wax cloth.

4435. Wood Filler.

Starch	12 parts.
Heavy spar.....	12 parts.
Siccative	2 parts.
Oil of turpentine, quantity sufficient.	

Make of the consistency of ordinary varnish, and for dark woods add up to 1 part

by weight of umber. Apply the filler with a medium stiff brush. When the coat, at first lustrous, becomes dull, remove everything from the surface by rubbing across the grain of the wood with a piece of felt or strong leather fastened to a piece of wood. Allow the prepared wood to dry eight hours, then rub thoroughly with glass paper, when it is ready for polishing.

4436. Imitation Ground Glass.

Sandarac	18 drams.
Mastic	4 drams.
Ether	24 ounces.
Benzine	16 to 18 ounces.

The above mixture to be painted on the glass.

4437. For Permanently Obscuring Glass.

Dip a piece of flat marble into glass cutter's sharp sand, moistened with water; rub over the glass, dipping frequently in sand and water. If the frosting is required very fine, finish off with emery and water. As a temporary frosting for windows, mix together a strong, hot solution of Epsom salts and a clear solution of gum arabic; apply warm. Or use a strong solution of sodium sulphate, warm, and when cool, wash with gum water. Or daub the glass with a lump of glazier's putty, carefully and uniformly, until the surface is equally covered. This is an excellent imitation of ground glass, and is not disturbed by rain or damp.

4438. Imitation Frost Crystals.

Dissolve 456 grains of nitrate of lead in 6 fluid ounces of water. If the solution is turbid, filter through paper. Place the solution on a table where it is intended to remain, and drop into it 200 grains of sal-ammoniac in long fibrous crystals. Small crystals of chloride of lead form and ascend through the denser liquid, presenting the appearance of an ascending snow-storm. When the lead is all precipitated, the crystals of chloride of lead begin to descend as a genuine miniature snow-storm, forming grotesque masses resembling a winter's landscape. If the vessel containing the crystals be not disturbed, it often preserves its beauty for a week or two.

Specimens and other small objects may be coated with crystals by suspending them in a solution of 18 ounces of alum to the pint of water. Dissolve the alum in the water by the aid of heat, and suspend the specimen in the solution by means of a small thread, or twine from a lath or stick placed horizontally across the top of the jar into which the solution has been poured. The process is best conducted in a cool situation.

VARNISHES.

4439. Anatomical Varnish.

Mastic	50.0
Sandarac	130.0
Balsam copalba.....	5.0
Camphor	5.0
Gum turpentine.....	12.0
Ether	10.0
Absolute alcohol.....	400.0

Stand in a warm place until a varnish is formed.

4440. Varnish for Bamboos.

A varnish prepared by dissolving 3 ounces white shellac in 10 fluid ounces of methylated spirits, applied to the bamboo with a camel's hair brush, will give a beautiful transparent coating, while showing the natural color of the wood.

4441. Basket Varnish.

Orange shellac.....	8 ounces.
Yellow resin.....	1 ounce.
Benzoin	$\frac{1}{2}$ ounce.
Bismarck brown.....	$\frac{1}{4}$ ounce.
Methylated spirit.....	$1\frac{1}{2}$ pints.
Vegetable naphtha.....	$\frac{1}{2}$ pint.

4442. Black Varnish for Coating Bottles.

Equal parts of asphalt and boiled linseed oil are heated for one hour over a naked fire to about 200 degrees C. (392 degrees F.); then a sufficient quantity of lampblack, previously triturated with oil of turpentine, is added, to make a mixture, which, when mixed with one-fourth or one-third its volume of oil of turpentine, will cover well. Usually, one coat is sufficient; in special cases, two coats may be required. Sometimes it is desirable to be able to see the light at which the liquid in the bottle is standing. This may be accomplished, according to the author, by leaving a small round spot on either side uncoated. The bottom of the bottle is likewise left unvarnished.

4443. Bookbinders' Varnish.

Three pints of 90 per cent alcohol, 8 ounces sandarac, 2 ounces mastic, in drops, 8 ounces shellac, and 2 ounces Venice turpentine. Dissolve by cold digestion and frequent agitation. Apply lightly on the book with a piece of cotton wool, a small sponge, or a brush.

4444. Bookbinders' Varnish.

Mastic, 6 ounces, in drops; 3 ounces coarsely pounded glass, separated from the dust by a sieve; 32 ounces 90 per cent alcohol. Place the ingredients in a sand bath over a fire and let them boil, stirring them

well. When thoroughly mixed introduce 3 ounces spirits of turpentine, boil for half an hour, remove from the fire, cool, and strain through cotton cloth.

4445. Gold Varnish for Bottle Caps.

Gamboge	40 grams.
Dragon's blood.....	5 grams.
Extract of sandal.....	5 grams.
Sandarac	75 grams.
Venice turpentine.....	25 grams.
Alcohol (95 per cent).....	900 grams.

Dissolve with the aid of heat, and filter.

4446. Cartridge Box Varnish (Mill-tairlack).

Shellac	100.0
Mastic	6.0
Sandarac	3.0
Venice turpentine.....	12.0
Castor oil.....	5.0
Alcohol	450.0

Let stand until dissolved; then add Black aniline, quantity sufficient. Paris black, quantity sufficient.

4447. Chinese Varnish.

Mastic	100.0
Sandarac.....	100.0
Gurjun balsam.....	10.0
Absolute alcohol.....	600.0

Allow to stand several days, and after the sediment has deposited, decant.

4448. Black Varnish for Coaches.

Asphaltum	$7\frac{1}{2}$ pounds.
Amber	40 ounces.
Resin	$7\frac{1}{2}$ ounces.
Drying linseed oil.....	$1\frac{1}{4}$ pints.

Melt together in an iron pot. When partly cool, add warm oil of turpentine, $1\frac{1}{4}$ pints.

4449. Black Varnish for Coal Buckets.

Asphaltum	$1\frac{1}{2}$ pounds.
Lampblack	$\frac{3}{8}$ pound.
Resin	$\frac{3}{4}$ pound.
Spirits of turpentine.....	$1\frac{1}{2}$ quarts.

Dissolve the resin and asphaltum in the turpentine; form a paste with lampblack and linseed oil, quantity sufficient; mix with the other. Apply with a brush.

4450. Varnish for Confectionery.

Take half a pound or more of gum benzoin, put into a bottle and cover it with fourth proof alcohol, cork up tightly and let it digest for at least two weeks, shaking up once or twice a day, after which time pour gently off any quantity required for present use. It should be the thickness of thin syrup; if used too thick it is apt to appear in streaks on the work when dry; if too thick, dilute it with alcohol. This varnish is perfectly harmless and fragrant, resembling somewhat the odor

of vanilla. It will also keep for years, growing better with age. It is a nice varnish for all kinds of chocolate work and candies; pulled and clear. It forms when dry, a thin, glossy film or skin over them, which prevents the access of the moisture of the surrounding atmosphere, and tends to keep them from becoming sticky for a much longer period of time.

4451. Rapidly Drying Varnish.

Mix intimately colophony with thick milk of lime; after 24 hours dry by heat, and powder. This powder is used for preparing varnishes from soft resins as follows: Melt 100 parts of pine resin, add with constant stirring 10 to 15 parts of the above powder, continue to heat for 30 minutes, remove from the fire and add linseed oil, 25 to 50 parts, and oil of turpentine, 35 to 90 parts, according to the thickness desired.

4452. Varnish for Drawings, Maps, Etc.

A varnish for paper which produces no stains may be prepared as follows: Clear dammar resin is covered, in a flask, with four and a half to six times its quantity of acetone, and allowed to stand for fourteen days at a moderate temperature, after which the clear solution is poured off. Three parts of this solution are mixed with four parts of thick collodion, and the mixture allowed to become clear by standing. It is applied with a soft camel's hair or beaver's hair brush, in vertical strokes. At first the coating looks like a thin white film, but on complete drying it becomes transparent and shining. It should be laid on two or three times. It retains its elasticity under all circumstances, and remains glossy in every kind of weather.

4453. Varnish for Fancy Work.

The following preparation makes an excellent varnish for baskets or leather work: Add one-half pound of asphaltum to one pint of turpentine. Let it stand covered over night before using. It is also used for card-receivers and watch-receivers made from butternut shells, and cones and acorns.

4454. Flexible Varnish.

India rubber, 1 ounce; drying oil, 1 quart; dissolve by heat. Very tough; dries in about 48 hours.

4455. Flexible Varnish.

India rubber, in shavings, 1 ounce; rectified mineral naphtha or benzol, 1 pint; digest at a gentle heat in a closed vessel, and strain. Dries very badly and never gets perfectly hard.

4456. Flexible Varnish.

From India rubber (cut small), $1\frac{1}{2}$ ounces; chloroform, ether (washed), or bisulphuret of carbon, 1 pint; digest in the cold until solution is complete. Dries as soon as it is laid on. Pure gutta-percha may be substituted for India rubber.

4457. Flexible Varnish.

Linseed oil, 1 gallon; dried white copers and sugar of lead, of each 3 ounces; litharge, 8 ounces; boil, with constant stirring, until it strings well, then cool slowly, and decant the clear portion. If too thick, thin it down with quick drying linseed oil. Used for balloons, gas bags, etc.

4458. Varnish for Grate Fronts.

Varnish with enough ivory black in it to cover well. Do not mix more than needed for use at one time, for when it stands long it does not do so well.

4459. Varnish for Harness.

Alcohol, 95 per cent..... 1 gallon.
White turpentine $1\frac{1}{2}$ pounds.
Gum shellac $1\frac{1}{2}$ pounds.
Venice turpentine $\frac{1}{4}$ pound.

Let stand in a vessel in the sun or by a stove until the gums are all dissolved, then add:

Sweet oil 4 ounces.
Lampblack 2 ounces.

Mix well together.

4460. India Rubber Varnish.

Incise 30 grams of finely cut caoutchouc in a linen bag, and suspend this within a flask containing a liter of benzine, by means of a thread held fast by the stopper, so that the bag remains near the surface of the liquid. In the course of six or eight days, the soluble portion of the caoutchouc, about 40 to 60 per cent, will pass into the benzine, while the contents of the bag will expand enormously. The clear solution, which is quite viscous, and contains 1.2 to 1.5 per cent of caoutchouc is then carefully separated. The swelled contents of the bag retain one-fourth to one-third of the benzine used, and may be utilized for the preparation of an inferior kind of varnish. A solution of India rubber in benzine, kept in half-full bottles, is decomposed on exposure to light, which may be seen by the change of the solution from a viscous to a thin fluid condition. Even in the dark this change goes on, but it requires about three times as much time.

4461. Japan Varnish.

Take 12 pounds Naples asphaltum and 2 pounds dark gum anime, melt it, and boil for 2 hours with 3 gallons linseed oil. Then boil 2 pounds dark amber with $\frac{1}{2}$ gallon

linseed oil, add the two together, and boil two hours longer, till the mass when cooled is plastic, like putty. This is afterward dissolved in 7 or 8 gallons of turpentine, and makes a black japan for wood or metal.

4462. Japanning.

An extra fine black is prepared from:

Amber	12 ounces.
Asphaltum, purified.....	2 ounces.
Boiled oil	$\frac{1}{2}$ pint.
Resin	2 ounces.
Oil of turpentine	16 ounces.

Fuse the gum and resin and asphaltum, add the hot oil, stir well together, and when cooling add the turpentine.

4463. Label Varnish.

White lac	1 fl. ounce.
Lead carbonate	4 drams.
Ether	$\frac{1}{2}$ pint.

Place the white shellac in a mortar and reduce to a moderately fine powder; then transfer to a bottle containing the ether and set aside, shaking the bottle occasionally until the powder resolves itself into a uniform solution; then add the lead in fine powder; shake well and filter through paper, returning the first portions of the filtrate two or three times until it becomes perfectly clear. Ordinary shellac may be used, but it imparts a brownish color to the labels. Paste the label upon the bottle, smooth as usual (it is not necessary to wait until it is dry), then apply the varnish with a soft brush.

4464. Label Varnish.

Sandarac (in coarse powder).....	100 parts.
Mastic	40 parts.
Copaiba	15 parts.
Venice turpentine	30 parts.
Oil of turpentine.....	40 parts.
Alcohol	90 parts.
Absolute alcohol	90 parts.

Macerate until solution is effected.

4465. Black Leather Varnish.

Dissolve 150 parts of shellac in 800 parts of alcohol, and add the solution to a melted mixture of 15 parts of Venice turpentine and 15 parts of yellow wax. Then add 40 parts of nigrosin (alcohol-soluble), and lastly enough alcohol to make 1,000 parts of varnish. The nigrosin may be substituted by 50 parts of lampblack, which should first be triturated with a small quantity of the alcoholic solution so as to produce a perfect mixture. The leather which is to be varnished should first be cleaned with a warm solution of green soap in water, or with a mixture of 3 parts of

alcohol and 1 part of water of ammonia, then allowed to dry completely before applying the varnish with a soft brush. It is finally rubbed over with a dry brush.

4466. Varnish for Lithographs, Copper Plates, Pictures, Chromos, Etc.

Mastic	100
Powdered glass.....	50
Oil turpentine.....	200

Place in a bottle, cork, and expose to the sun's rays for one month, frequently agitating. To the thinned liquid add:

Larch turpentine.....	150
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After several days' exposure to the sun's rays, filter or decant.

4467. Asphaltum Varnish for Machinery.

First paint the articles in a japan color, such as:

Asphaltum	3 ounces.
Boiled oil.....	4 quarts.
Burnt umber.....	8 ounces.

Mix by heat, and when cooling thin with turpentine. Then coat them with a suitable transparent or light varnish.

4468. Varnish for Marble.

To heighten the luster of smooth marble surfaces, apply 1 part of wax and 1 of sandarac, both dissolved in 6 parts of oil of turpentine. Polish with a soft brush.

4469. Mastic Varnish.

Take of pale and picked gum mastic, 5 pounds; glass (pounded as small as barley, and well washed and dried), 3 pounds; finest newly-rectified oil of turpentine (lukewarm), 2 gallons; put them in a clean 4-gallon tin bottle or can, bung down securely, and keep it rolling backwards and forwards pretty smartly on a counter, or any other solid place, for at least 4 hours, when, if the gum is all dissolved, the varnish may be decanted; strain through muslin into another bottle, and allow to settle; if the solution is still incomplete, the agitation may be continued for some time longer, or the gentle warmth applied as well. Very fine.

4470. Mastic Varnish.

Second quality.—From mastic, 4 pounds; oil of turpentine, 2 gallons; dissolve with heat.

4471. Oak Varnish.

Clear pale resin, $3\frac{1}{2}$ pounds; oil of turpentine, 1 gallon; dissolve.

4472. Oak Varnish.

To the last, add of Canada balsam 1 pint. Both are cheap and excellent varnishes for wood or metal.

4473. Stove Varnish.

Asphaltum 2 pounds.
 Boiled linseed oil..... 1 pint.
 Oil turpentine..... 2 quarts.

Fuse the asphaltum in an iron pot, boil the linseed oil and add while hot, stir well, and remove from the fire. When partially cooled, add the oil of turpentine. Some makers add driers.

4474. Black Varnish for Straw Hats.

Nigrosine 6 drams.
 Sandarac 4 ounces.
 Venice turpentine..... 1 ounce.
 Alcohol, q. s..... 1 pint.

4475. Black Varnish for Straw Hats.

Shellac 150 parts.
 Venice turpentine..... 15 parts.
 Yellow wax..... 15 parts.
 Nigrosine 40 parts.
 Alcohol, q. s..... 1,000 parts.

4476. Black Varnish for Straw Hats.

Saturated solution borax.... 90 parts.
 Bleached shellac..... 3 parts.
 Nigrosine 7 parts.

4477. White Varnish.

Tender copal, 1½ ounces; camphor, 1 ounce; alcohol of 95 per cent, 1 quart, to which, when dissolved, is added mastic, 2 ounces; Venice turpentine, 1 ounce. The hole is then dissolved and strained. This varnish is extremely hard.

4478. Tapestry or Drapery Varnish.

Sandarac 100.0
 Shellac 50.0
 Venice turpentine..... 50.0
 Mastic 50.0
 Elemi 20.0

Contuse and soak in

Alcohol 700.0
 Dissolve, set aside and decant.

4479. Theatrical Varnish.

For affixing mustaches.

Resin 4 parts.
 Oil castor..... 1 part.
 Methylated spirit..... 16 fl. parts.
 Dissolve, strain and perfume.

4480. Violin Varnish.

Sandarac 1½ ounces.
 Mastic, in tears..... 2 ounces.
 Elemi..... ½ ounce.
 Dragon's blood..... ¼ ounce.
 Turpentine ½ ounce.
 Castor oil..... ½ ounce.
 Spirit 10 ounces.

Put the turpentine and spirit in a wide-mouthed bottle, with a small quantity of powdered glass, and add mastic. Stir frequently, and after 24 hours add the other

resins. Leave to stand for another 24 hours, and then add the oil under stirring. Let the mixture stand for a fortnight in strong light; then filter through cotton.

4481. Varnish for Wooden Shoes.

Powdered sandarac 10.0
 Burgundy pitch..... 110.0
 Oil turpentine 400.0

4482. Zinc White.

Gum dammar..... 1 ounce.
 Gum mastic..... 1 ounce.
 Benzine..... 5 ounces.

Powder the gums and dissolve in the benzine; then rub up 1 ounce of finely levigated zinc white with the product.

4483. To Remove Varnish.

Twenty pounds solution of caustic soda (20 degrees B.), 1 pound potato starch, and 20 pints of water are placed in a closed boiler and thoroughly agitated. Heat is thus generated and causes gelatinization of the mass, which is then treated with 57½ pints of water and 1¼ pounds of potato starch added to form 100 pounds of product. This varnish remover may be reduced with water to any desired percentage of alkali.

FURNITURE POLISHES.**4484. Furniture Polish.**

Alcohol 21 ounces.
 Gum shellac..... 2 ounces.
 Linseed oil..... 14 ounces.
 Gum benzoin..... 2 ounces.
 Oxalic acid..... 1 ounce.
 White resin..... 2 ounces.

Dissolve the gums and acid in the alcohol; let it remain 24 hours, and then add the oil.

4485. Furniture Polish.

Shellac 4 ounces.
 Alcohol 2 pints.
 Dissolve and add
 Linseed oil..... 2 pints.
 Turpentine 1 pint.

Mix well and add

Sulphuric ether..... 4 ounces.
 Ammonia 8 ounces.
 Apply with a sponge.

4486. Furniture Polish.

Shellac 2 pounds.
 Mastic 1 ounce.
 Sandarac 1 ounce.
 Copal 12 ounces.
 Alcohol 1 gallon.

This is to be used as a French polish, which involves application with a rubber.

4487. Furniture Polish.

Olive oil..... 9 parts.
 Oil amber, rectified..... 9 parts.
 Oil turpentine..... 9 parts.
 Tincture alkanet..... 1 part.
 Mix and keep in a well-stoppered bottle.

4488. Furniture Polish.

Melt together 4 parts of hard paraffin and 1 part animal fat, and pour the mixture into a vessel containing hot water. Add 12 parts of oil of turpentine, and stir in. Let stand until cold, and remove the paste for use.

4489. Furniture Polish.

Yellow wax..... 1 pound.
 Yellow soap..... 2 ounces.
 Oil turpentine..... 2 pints.
 Boiling water..... 2 pints.

Melt the soap and wax over a slow fire, add the turpentine, and lastly stir in the water until quite cold.

4490. Furniture Polish.

Alcohol 4 ounces.
 Turpentine 2 ounces.
 Dammar varnish..... 1 ounce.
 Linseed oil (raw)..... 8 ounces.
 Acetic acid..... 1 ounce.

4491. Furniture Polish.

Egg whites..... 3 ounces.
 Linseed oil..... 1 pint.
 Methyl alcohol..... 5 ounces.
 Archil 1 ounce.
 Acid muriatic..... 4 ounces.
 Vinegar 1 pint.

4492. Furniture Polish.

Colophony, quantity sufficient.

Milk of lime, quantity sufficient.

Mix intimately; after 24 hours, dry by heat, and powder. This powder is used for preparing varnishes from soft resins, as follows: Melt 100 parts of pine resin, add with constant stirring 10 to 15 parts of the above powder, continue to heat for 30 minutes, remove from fire and add 25 to 50 parts of linseed oil and 35 to 90 parts of turpentine, according to the thickness desired.

4493. Furniture Polish.

Gum shellac..... 2 ounces.
 Alcohol 3 ounces.

Mix and dissolve by the water bath, and after it cools add:

Benzin 1 ounce.
 Oxalic acid..... ½ ounce.

Raw linseed oil, quantity sufficient, add..... 1 quart.

Mix. Apply to furniture with soft cloth or chamois.

4494. Furniture Polish.

Linseed oil..... 3 ounces.
 Sweet oil..... 1 ounce.
 Turpentine 1 ounce.
 Alcohol ½ ounce.
 Benzin ½ ounce.
 Holland gin..... ¼ ounce.
 Ammonia water..... ½ ounce.

4495. Furniture Polish.

Linseed oil..... 6 ounces.
 Dilute acetic acid..... 3 ounces.
 Alcohol 3 ounces.
 Butter of antimony..... ½ ounce.

Mix the linseed oil gradually with the turpentine, then add the alcohol, and lastly the butter of antimony. To be applied with a soft cloth, using considerable friction.

4496. Polishing Wax for Furniture.

Pour 3 parts oil of turpentine over 4 parts white wax in an earthen vessel, cover the vessel tightly with strong paper, and place it in warm water on the back part of a warm stove to melt the wax. When both substances are united, let the mixture cool until it begins to be solid and assumes a whitish color, then mix with 2 parts strong alcohol.

4497. Furniture Oil.

Linseed oil..... 1 quart.
 Distilled vinegar..... 6 ounces.
 Spirit of turpentine..... 3 ounces.
 Hydrochloric acid..... 1 ounce.
 Alcohol..... 2 ounces.

4498. Furniture Oil.

Linseed oil..... 8 ounces.
 Vinegar..... 4 ounces.
 Alcohol..... 3 ounces.
 Mucilage..... ½ ounce.
 Oil of turpentine..... ½ ounce.
 Butter of antimony..... ¼ ounce.
 Hydrochloric acid..... 1 ounce.

4499. Furniture Oil.

Linseed oil..... 16 ounces.
 Resin 4 ounces.
 Alcohol 3 ounces.
 Butter of antimony..... 1 ounce.
 Hydrochloric acid..... 2 ounces.

Melt the resin, add the oil, take it off the fire and stir it in the vinegar; let it boil for a few minutes, stirring it; when cool, put it into a bottle and add the other ingredients, shaking all together. The last two are especially used for reviving French polish.

4500. Furniture Oil.

Linseed oil..... 14 ounces.
 Vinegar 1½ ounces.
 Hydrochloric acid..... ½ ounce.

Mix.

4501. Furniture Oil.

Linseed oil..... 1 pint.
 Oil of turpentine..... ½ pint.
 Alcohol 4 ounces.
 Powdered resin..... 1½ ounces.
 Rose pink..... ½ ounce.
 Mix.

4502. Furniture Oil.

Melt 3 or 4 pieces of sandarac, each of the size of a walnut, add 1 pint boiled oil, and boil together for 1 hour. While cooling, add 1 dram of Venice turpentine, and, if too thick, a little oil of turpentine also. Apply this all over the furniture, and after some hours rub it off; rub the furniture daily, without applying fresh varnish, except about once in two months. Water does not injure this polish, and any stain or scratch may be again covered, which cannot be done with French polish.

4503. Furniture Cream.

Pearl ash, 2 ounces; soft soap, 4 ounces; beeswax, 1 pound; water, 1 gallon; boil until the whole is united and forms a creamy liquid when cold.

4504. Furniture Cream.

Beeswax, ½ pound; good yellow soap, ¼ pound; water, 5 pints; boil to a proper consistency, with constant agitation, then add boiled oil and spirit of turpentine, of each ½ pint. For use, dilute with water, spread upon the surface with a painter's brush, and then polish off with a hard brush, cloth or leather.

4505. Furniture Cream.

Boiled oil (pale), ½ pint; beeswax, 1½ ounces; mixed by heat. Applied by a rubber and at once polished off.

4506. Furniture Cream.

White wax, 8 parts; resin, 2 parts; true Venice turpentine, ½ pint; melt at a gentle heat. The warm mass, completely melted, is poured into a stone jar, agitated, and 6 parts of oil of turpentine (rectified) added thereto. After 24 hours the mass, having the consistency of soft butter, is ready for use. Before using the paste, the furniture should be washed with soap and water, and then well dried.

4507. Furniture Cream.

White wax..... ½ ounce.
 Beeswax 4 ounces.
 Castile soap..... ½ ounce.
 Spirits turpentine..... ½ pint.
 Boiling water..... ½ pint.

Melt the wax in a covered jar by gentle heat, add the turpentine carefully, and then gradually add the soap, previously dissolved in the water, and stir till stiff.

4508. Laundry Polish.

Melt 5 parts of stearic acid, add 5 parts of absolute alcohol, and triturate the mixture with 95 parts of wheat starch. Starch prepared from this takes easily a fine polish. The polishing irons should be thoroughly cleaned immediately after use.

4509. Laundry Starch Gloss.

Spermaceetl 1¼ ounces.
 Gum arabic 1¼ ounces.
 Borax 1¼ ounces.
 Glycerine 4½ ounces.
 Distilled water 1½ pints.

If desired to use with starch mix 4½ teaspoonfuls with 4½ ounces of boiling starch.

4510. Liquid Gloss Starch.

Borax, saturated solution, 2 parts; tragacanth mucilage, 1 part; mix. One tablespoonful to 1 pint of starch.

4511. To Improve Starch.

To each bowl of starch, add 1 teaspoonful of Epsom salts, and dissolve in the usual way by boiling. Articles starched with this will be stiffer, and will be rendered to a certain degree fireproof.

4512. To Prevent Stoves From Rusting.

Apply kerosene with a cloth. This will prevent stoves from rusting during the summer. Also an excellent material to apply to all iron tools used about a farm.

4513. Blacking, Stove Dealer's Liquid.

Plumbago 1 pound.
 Resin 4 ounces.
 Benzine 1 gallon.

Dissolve the resin in the benzin, and mix the plumbago with it. It is said to give no offensive smell when the stove is used and to keep the iron from rusting. Another process for a good liquid blacking is to mix with powdered plumbago enough asphaltum varnish to form a thick paste and to add to it sufficient turpentine or benzine to bring the mixture to the requisite degree of thinness.

4514. Lacquer for Tinware.

Thirty parts of crystallized acetate of copper are rubbed to a fine powder in a mortar, then spread out in a very thin layer upon porcelain, and kept for a few days in a moderately warm place, whereby the water of crystallization and a larger portion of the acetic acid will be dissipated. The residuary, bright brown, light powder, is then again rubbed up with the addition of a little oil of turpentine, and finally mixed. under continued stirring, with 100 parts of fine copal varnish heated

to 167 degrees F. If the copper salt has been very finely levigated, it will be dissolved, on stirring, in perhaps 15 minutes. The varnish is now poured into a glass and set aside, for a few days, in a warm place, being occasionally shaken up. Any small, undissolved residue of oxide of copper may be utilized at the next operation.

4515. New Polish for Wood.

Dissolve 6 pounds of shellac in about 4 to 5 gallons of pure alcohol. Then pour 3½ ounces of high grade sulphuric ether over 3½ ounces of collodion cotton in a bottle, add 1¾ ounces of camphor, stir thoroughly and add 96 per cent alcohol enough to completely dissolve the cotton.

4516. Moody's New Polish.

Rectified wood spirit....	8	parts.
Shellac	1½	parts.
Benzoin	½	part.
Dragon's blood (if desired)	1 1-15	parts.

Dissolve the ingredients by heating and filter the solution through flannel. Apply with camel's hair brush.

4517. White Polish, for Wood.

White wax 1 pound.

Solution of potash..... 32 ounces.

Boil to proper consistency.

4518. To Polish Walnut.

To give black walnut a fine polish so as to resemble rich old wood, apply a coat of shellac varnish, and then rub it with a piece of smooth pumice stone until dry. Another coat may be given and the rubbing repeated. After this, a coat of polish, made of linseed oil, beeswax and turpentine, may be well rubbed in with a dauber, made of a piece of sponge tightly wrapped in a piece of fine flannel several times folded and moistened with the polish. If the work is not fine enough, it may be smoothed with the finest sandpaper and the rubbing repeated. In the course of time the walnut becomes very dark and rich in color, and in every way is superior to that which has been varnished.

4519. French Polish.

Gum sandarac 14¼ ounces.

Gum in drops..... 7½ ounces.

Yellow shellac 14¼ ounces.

Alcohol (0.8,295 degrees specific gravity) 3½ quarts.

The mode of polishing with this varnish is as follows: First the wood to be treated is saturated with linseed oil, the excess to be removed with old flannel or sawdust sprinkled over it, which helps to take it up. After this the varnish is applied by

saturating the surface with a piece of old soft linen cloth many times folded into a sort of cushion and rubbed softly on the wood, turning the linen from time to time until it appears nearly dry. The linen should be saturated afresh with varnish and the rubbing continued until the pores of the wood are completely filled. Care should be taken not to make the linen too wet nor to rub too hard, especially at the beginning of the operation. When the varnish sticks or becomes tacky, a very small drop of sweet oil is to be applied with the end of your finger uniformly all over the cushion. The finishing is effected by pouring a little pure alcohol upon a piece of clean linen, which is then rubbed lightly over the varnished wood; and as the linen and varnish dry the wood is rubbed more briskly until it assumes a beautiful mirror-like polish. Two or three coats of varnish are sufficient for woods not very porous.

4520. Polish on Mahogany.

Mix one part of boiled linseed oil with 2 parts of alcoholic shellac varnish. Shake well before using. Apply in small quantities with a cloth, and rub the work vigorously until the desired polish is secured.

4521. Piano Polish.

Butter of antimony..... 1½ ounces.

Alcohol..... 1½ ounces.

Raw linseed oil..... 8 ounces.

Pure cider vinegar..... 8 ounces.

4522. Piano Case Polish.

Raw linseed oil..... 2½ pints.

Spirit turpentine..... 10 ounces.

Benzin 5 ounces.

Alcohol 5 ounces.

Water of ammonia..... 5 ounces.

4524. Floor Polish.

Yellow wax..... 125 parts.

Hard soap..... 30 parts.

Glue 60 parts.

Soda ash (80 degrees)..... 125 parts.

Water and ochre, sufficient quantity.

Dissolve the soda in 2,000 parts of water, add the wax, boil down to 1,250 parts, and add the soap. Dissolve the glue in 500 parts of water by the aid of heat, stir in the ochre, and mix the whole with the solution of wax and soap.

4523. Floor Polish for Light Wood.

White wax..... 750 parts.

Bleached shellac..... 750 parts.

Bright resin..... 60 parts.

Oil of turpentine..... 1,000 parts.

Alcohol, commercial, 90

per cent..... 4,000 parts.

Melt the wax, shellac and resin together,

remove from the fire, and add, while still hot, the turpentine, and stir well. Warm the alcohol to a point nearly that of the solution, and add, with rapid and thorough stirring. This should be applied with varnish brushes, and afterwards polished with flannel or woolen cloths.

4525. Floors, to Restore Color.

Allow 1 part calcined soda to stand $\frac{3}{4}$ hour in 1 part slaked lime. Add 15 parts water and boil. Apply this solution with a rag. When dry, rub with hard brush, fine sand and water. One part sulphuric acid with 8 parts water will enliven the wood. When dry, wash and wax.

4526. Floor Polish.

Stearin	1,000 parts.
Yellow wax.....	250 parts.
Potash.....	600 parts.
Hard soap.....	100 parts.
Water and coloring matter to suit.	

4527. Floor Polish.

White wax.....	750 parts.
Bleached shellac.....	750 parts.
Bright resin.....	60 parts.
Oil of turpentine.....	1,000 parts.
Alcohol	4,000 parts.

Melt the wax, shellac and resin together, remove from the fire and add, while still hot, the turpentine, and stir well. Warm the alcohol to a point nearly that of the solution and add, with rapid and thorough stirring.

4528. Floor Gloss, or Polish.

Cut 1 pound of best beeswax into small pieces, dissolve thoroughly in 3 pints of turpentine, stirring occasionally if necessary. The mixture should be only a trifle thicker than the turpentine alone. Apply it with a rag to the surface of the floor, which should be smooth and perfectly clean; this is the difficult part of the work, for the right amount to be applied is learned only by experience, less being required for hard, coarse-grained wood than for soft and open-grained. Experiment on a square foot or so first. Put on what you think is enough, and leave it untouched for 24 hours or longer if necessary. When thoroughly dry, rub it with a hard brush until it shines. If it polishes well, repeat the process over the entire floor; but if not, remove the wax with fine sandpaper and try again, using more or less than before until the desired result is secured. If the mixture is slow in drying, add a little japan dryer, in the proportion of about 1 part of the dryer to 6 of turpentine.

4529. Floor Gloss, or Polish.

Boil 20 parts of litharge in 100 parts of linseed oil for an hour, then add 75 parts of best yellow wax melted and 7 parts tallow, and 90 parts molasses. Heat to 230 degrees F. until the water is evaporated, and then add 50 parts lampblack, 140 parts turpentine, 17 parts alcohol, $\frac{1}{2}$ parts shellac, 1 part aniline.

4530. Polish for Marble Clocks.

First clean the marble with a mixture of soft soap, 1 ounce; fuller's earth, 1 ounce; and water, 4 ounces. Apply this with a soft rag and allow to remain on for several hours. Wash off with warm water, dry with a soft cotton towel, and polish with the following, briskly rubbing:

Linseed oil.....	2 ounces.
Turpentine	1 ounce.
Methylated spirit.....	1 ounce.
Old ale.....	4 ounces.

Mix well by shaking.

4531. Polish for Marble.

Magnesia.....	$\frac{1}{2}$ ounce.
Oxalic acid.....	2 ounces.
Warm rain-water.....	1 pint.

Polish with woolen cloths.

4532. To Polish Slate (Magnus' Patent).

Mix intimately:

Linseed oil.....	7 parts.
Ground ochre.....	1 part.
Tar oil.....	3 parts.
Asphaltum	1 part.

Apply the mixture to the surface of the slate by means of a brush, then submit the article to a heat of about 200 degrees F., when it is cooled off and polished with pumice stone and tripoli.

4533. To Dye Mother-of-Pearl Greenish Black.

The objects are covered with water of ammonia, to which more chloride of silver has been added than it can dissolve. After one or two days the mother-of-pearl is taken out and exposed to the sunlight for a few days. The greenish lustre cannot be produced at will, but seems to depend on the mother-of-pearl itself. A solution of sulphide of bismuth in hyposulphite of sodium has also been employed for the purpose.

4534. To Color Meerschaum.

Ordinarily, the pipe is boiled for coloring in a preparation of wax, which is absorbed, and a thin coating of wax is held on the surface of the pipe, and is made to take a high polish. Under the wax is retained the oil of tobacco which is absorbed by the pipe, and its hue grows darker in propor-

tion to the tobacco used. A meerscham pipe at first should be smoked very slowly, and before a second bowlful is lighted the pipe should cool off. This is to keep the wax as far up the bowl as possible, and rapid smoking will overheat, driving the wax off and leaving the pipe dry and raw. A new pipe should never be smoked out of doors in cold weather.

4535. To Color Meerscham.

Fill the pipe and smoke down about one-third, or to the height to which you wish to color. Leave the remainder of the tobacco in the pipe and do not empty or disturb it for several weeks, or until the desired color is obtained. When smoking, put fresh tobacco on the top and smoke to the same level.

4536. Waterproofing Compound.

Linseed oil..... 8 ounces.
Boiled linseed oil..... 10 ounces.
Suet 8 ounces.
Yellow wax..... 8 ounces.
Melt.

4537. Waterproofing Compound, Dr. Harvard's.

Wax..... 8 ounces.
Resin..... 4 ounces.
Mutton suet..... 4 ounces.

Boil together and apply warm to new boots.

4538. Waterproofing Compound, Col. Hawker's.

Drying oil..... 1 pint.
Burgundy pitch..... 1 ounce.
Oil of turpentine..... 2 ounces.

Melt over a slow fire, and add a few drops of lavender or thyme. Brush the boots repeatedly with the composition before the fire till they appear fully saturated.

4539. Waterproofing Compound, for Leather, etc.

Cut 3 drams of India rubber into small pieces, soak them for 24 hours in a solution

of common soda; dissolve this and 3 ounces of asphaltum in 12 ounces of camphine, then add $\frac{1}{2}$ ounce of boiled linseed oil.

4540. Waterproofing Compound, for Cloth.

It is alternately dipped in a solution of acetate of lead with a little gum, and solution of alum.

4541. Waterproofing Compound, for Hats.

Boil 8 pounds of shellac, 3 pounds of frankincense and 1 pound of borax in sufficient water.

4542. Waterproofing Compound, for Canvas, etc., Mr. Castley's.

Gutta-percha, 3 parts, is dissolved in resin spirit, 9 parts, at a heat of 120 to 140 F., stirring occasionally.

4543. Canvas, to Make Waterproof.

White lead, 4 pounds; spirits of turpentine, $\frac{1}{4}$ part; white vitriol, $\frac{1}{2}$ ounce; sugar of lead, $\frac{1}{2}$ ounce; and boiled oil to make it thin; apply with a paint brush to the canvas or linen, which must be well washed to take out the stiffening, well dried and stretched tight on a frame while being painted.

4544. Waterproofing, for Sailcloth.

Grind 96 pounds of English ochre with boiled oil, and add to it 16 pounds of black paint. Dissolve 1 pound yellow soap in 1 pail of water on the fire, and mix it, while hot, with the paint. Lay this composition, without wetting it, upon the canvas as stiff as can conveniently be done with the brush, so as to form a smooth surface; the next day, or the day after (if the latter, so much the better), lay on a second coat of ochre and black, with a very little, if any, soap; allow this coat a day to dry, and then finish the canvas with black paint.



PART IX.

Miscellaneous and Unclassified Formulas.

SODA SYRUPS.

4545. Soda Syrup.

Pure white sugar..... 35 pounds av.
Distilled water 20 pints.

Pour the water into a kettle, add the sugar and bring the mixture to a boil, stirring constantly. Then remove from the fire and strain while hot.

This syrup will neither crystallize in cold nor ferment in warm weather.

Either rock candy syrup, or simple syrup made according to the foregoing formula, can be used where "syrup" is commended.

4546. Banana Syrup.

To each pound of banana pulp add gradually the same weight of hot water, heat gently, strain, and add sugar three pounds. Dissolve.

4547. Beef, Iron and Wine for Soda Fountains.

Beef, iron and wine, 1 ounce; vanilla syrup, 3 ounces.

For dispensing: For 2 quarts—Concentrated extract of beef, 2 ounces; pyrophosphate iron, $\frac{1}{2}$ grain (dissolve in $\frac{1}{2}$ pint boiling water). Add tincture curacoa, 2 ounces; tincture orange peel, 2 ounces; syrup, $12\frac{1}{2}$ ounces; alcohol, $12\frac{1}{2}$ ounces; solution citrate of ammonia, 2 ounces; sherry wine, 23 ounces.

4548. Cherry Syrup.

Cherry juice, fermented and
filtered 1,200
Water 1,200
Sugar 3,000
Citric acid 35

Dissolved by heat to form a syrup.

4549. Chocolate Syrup.

Bakers fountain chocolate.. 1 pound.
Syrup 1 gallon.
Extract vanilla, enough.

Shave the chocolate into a gallon porcelain evaporating dish and melt with a gentle heat, stirring with a thin-bladed spatula. When melted, remove from the

fire and add one ounce of cold water, mixing well. Add gradually one gallon of hot syrup and strain; flavor to suit. Use one ounce to a mug.

4550. Chocolate Syrup.

Chocolate (of good quality) 2 pounds.
Sugar (granulated) $3\frac{1}{2}$ pounds.
Water 6 pints.
Extract vanilla $\frac{1}{2}$ ounce.

Break the chocolate fine and mix with the water, and bring to a boil, and continue the heat for a few minutes, until the mixture is free from lumps. It should be constantly stirred while heat is applied. Add the sugar and dissolve, and strain through a fine sieve while hot. If too thick when cold, add sufficient water, and if not sweet enough to suit the taste, add simple syrup; add the extract of vanilla when cold. The important point is to stir well, and not scorch the chocolate.

4551. Chocolate Syrup.

Baker's vanilla chocolate.. $\frac{1}{2}$ pound.
Baker's commercial chocolate 1 pound.
Cornstarch 6 ounces.
Hot water 2 gallons.
Simple syrup 3 quarts.

Dissolve the chocolate in hot water, using great care not to scorch it. Mix the cornstarch with cold water. Before adding the cornstarch see that the chocolate is thoroughly dissolved, and brought to a boiling heat; then add the cornstarch and boil well, that it may be sufficiently cooked to prevent any starchy taste. Strain through a sieve to remove coarser particles. When replenishing the apparatus be sure to strain again, using a coarser strainer. Dispense hot and keep the cream on the counter to reduce the temperature. In dispensing it, sufficient cream should be put into the cup first; add the chocolate, then sweetening if necessary, and mix with the stream from the draught tube.

4552. Chocolate Syrup.

Selected chocolate, 1 pound; water, 4 pints. Have the chocolate rubbed well to powder, adding 4 pounds sugar; add water and bring to boiling point, with constant stirring; remove from the source of heat; continue to stir for 20 minutes; when cold add extract vanilla, 1 ounce; essence cinnamon, $\frac{1}{4}$ ounce, and enough thin syrup to make 1 gallon.

4553. Chocolate Syrup.

Confectioners' chocolate... $\frac{1}{2}$ pound.
Hot water 2 quarts.
Condensed milk 1 can.
Granulated sugar 5 pounds.
Whites of two eggs.
Extract of vanilla..... 1 ounce.
Gum foam 1 ounce.

It should be prepared in a porcelain-lined evaporating dish. The chocolate cut fine into the dish, apply heat, rubbing the chocolate with pestle until a smooth paste is obtained, to which add the water (which must be boiling hot) gradually, stirring constantly, then stir in the condensed milk and sugar until both are dissolved; set aside to cool. When cold skim off the fat, particles of chocolate, etc., which will have covered the surface, add the whites of eggs, previously well beaten, the extract of vanilla and gum foam, strain through muslin and it is ready for use.

4554. Chocolate Syrup.

Baker's chocolate, $\frac{1}{2}$ pound, grate into a porcelain-lined kettle; stir in $\frac{1}{2}$ ounce borax; $\frac{1}{2}$ ounce boracic acid; 1 ounce cornstarch; add slowly while stirring, 2 quarts of water; bring to a boil. Dissolve in this 6 pounds sugar. Strain, when cold add extract vanilla, 1 ounce.

Condensed milk, 1 can, and whites of 2 eggs; and gum foam may be added if desired.

4555. Chocolate Cream Syrup.

Chocolate (Baker's for fountain use) 4 ounces.
Cocoa, Van Houten's.. 2 ounces.
Cold water 11 ounces.
And when evenly suspended, add:
Infusion of quillaja.... 5 ounces.

Let stand until dissolved, or about 1 hour, then add:

Condensed milk 1 can.
Powdered boric acid,
about 2 teaspoonfuls.
Simple syrup 1 gallon.

Stir well, boil 1 minute and use without straining.

4556. French Phosphated Chocolate Syrup.

Finest French chocolate... 1 pound.
Sugar 6 pounds.
Water $\frac{1}{2}$ gallon.
Solution citric acid (1 to 16) 1 ounce.
Vanilla extract..... $\frac{1}{2}$ ounce.
Foam 1 ounce.

Bring to boil, strain, add vanilla and foam.

4557. Coca Syrup.

Wine of coca..... 1 pint.
Cane sugar or rock candy
syrup 7 pints.

This has a pleasant, very slightly bitterish taste, enjoyed by many soda water drinkers.

4558. Coffee Syrup.

Mocha coffee..... 4 ounces.
Java coffee..... 12 ounces.
Granulated sugar..... 9 pounds.
Water, sufficient to make.. 1 gallon.

Mix the previously roasted and finely ground coffee, and transfer to a suitable vessel; macerate with 3 quarts of water over night; steam, without boiling, for 2 hours; then strain. Let stand for about two hours, then pour off clear liquid through a muslin strainer, taking care not to let any of the muddy precipitate enter the strainer. Make up to 1 gallon with water and filter for the last time through a fine muslin strainer.

4559. Coffee Syrup.

Mocha coffee..... 8 ounces.
Java coffee..... 8 ounces.
Alcohol 1 pint.
Water 4 pints.
Rock candy syrup, sufficient
to make..... 2 gallons.

Percolate coffee with mixture of alcohol and water, and add percolate to syrup.

4560. Coffee Syrup.

Fluid extract coffee..... 8 fl. ounces.
Tartaric acid..... 1 dram.
Simple syrup, sufficient to
make..... 1 gallon.
Dissolve and mix.

4561. Coffee Syrup.

Best Java coffee..... 1 pound.
Moisten with brandy, percolate with boiling water till 3 pints have passed, add and dissolve 6 pounds sugar, and make up to 1 gallon with water, add 1 ounce foam.

4562. Coffee Syrup.

Java coffee, 2 pounds (ground very finely); mix 2 pints of alcohol with 6 pints of water, moisten the coffee, and in a suitable percolator add the remaining liquid to thoroughly exhaust the coffee. At a very gentle heat evaporate the alcohol and add 4 pounds of sugar. Make to the measure of 1 gallon by adding thin, plain syrup.

4563. Cream Syrup (Avoid Heat).

Cream 1 pint.
Milk 1 pint.
Sugar 1 pound.

4564. Cream Syrup (Avoid Heat).

Condensed milk (without sugar)..... 1 pint.
Water 1 pint.
Sugar 1½ pounds.

4565. Cream Syrup (Avoid Heat).

Condensed milk (with sugar)..... 1 can or ½ pint.
Water ½ pint.
Thin syrup..... 1 pint.

4566. Whipped Cream Syrup.

Gum acacia..... 2½ pounds.
Crushed sugar..... 7½ pounds.
Tincture of quillaja..... 10 fl. ounces.
Benzolic acid..... 1½ drams.
Hot water..... 5 pints.

Dissolve the finely sifted gum in the hot water; strain, then dissolve the sugar in the clear solution with the aid of a gentle heat, and add lastly the tincture of quillaja, or soap bark, and benzoic acid.

4567. Creosote Syrup.

Creosote 1 part.
Cognac brandy..... 50 parts.
Simple syrup..... 300 parts.
Tincture of peppermint... 2 parts.

4568. Egg Phosphate Syrup.

Lemon syrup..... 1½ ounces.
Fresh egg..... 1
Citric phosphate..... 1 dram.

Mix well with shaker, and fill with hot water from draught tube. Have water a few degrees below boiling point, to prevent the egg becoming stringy.

4569. Egg Phosphate Syrup.

Lemon or orange syrup 1 to 1½ ounces.
Compound phosphate solution..... 1 to 2 fl. drams.
Shaven ice..... 2 ounces.
Egg..... 1 ounce.

Into a tumbler put the articles in the above order, add ice water 2 ounces, shake vigorously or pour it from one tumbler to another several times; pour through a

strainer and fill up the glass with carbonated water.

Lime and lemon juice are kept in bottles, and with ½ ounce of the juice, 1 ounce of syrup and enough carbonated water to fill a mineral water glass without foam, is the usual method of dispensing it.

Limes, lemons and oranges are kept by some to furnish what is asked for under the name of lime lemonade and orangeade. The fruit is cut, the juice pressed, a few drops of flavor of the fruit peel added: if oranges are used, a little citric acid solution, 1½ to 2 ounces syrup, and fill glass with carbonated water.

4570. Egg Phosphate Syrup.

Lemon syrup..... 2 pints.
Orange syrup..... 2 pints.
Eggs..... 32
Phosphoric acid (U. S. P.) 1 to 2 fl. ounces.

Thoroughly incorporate this with a beater. Draw 1½ to 2 fluid ounces in a large tumbler and fill with carbonated water.

4571. Framboise Syrup.

Raspberry syrup..... 1 pint.
Currant syrup..... 2 pints.

4572. Fruit Phosphates Syrup.

Strawberry syrup..... 8 fl. ounces.
Pineapple syrup..... 8 fl. ounces.
Cherry syrup..... 8 fl. ounces.
Pear syrup..... 8 fl. ounces.
Dilute phosphoric acid or phosphate solution..... 1 fl. ounce.

4573. Ginger Syrup.

Ginger ale extract (any good make)..... 3 ounces.
Solution citric acid (1 to 16) ½ ounce.
Foam 1 ounce.
Syrup, q. s. to..... 1 gallon.
Caramel to color.

4574. Ginger Syrup.

Tincture ginger (U. S. P.) or soluble essence ginger (Nat. Formulary) ½ to 1 fl. ounce.
Simple syrup..... 2 pints.

4575. Ginger Syrup.

Tincture ginger (U. S. P.) ½ fl. ounce.
Pure strained honey..... 4 fl. ounces.
Simple syrup..... 20 fl. ounces.

The honey must be pure and free from any additions whatever. No foam extract or acid solution is needed when pure honey is used as above.

4576. Ginger Syrup.

Extract Jamaica ginger..... 1 dram.
Hot plain syrup..... 3 ounces.
Mix with stream from the draught tube.

4577. Ginger Syrup.

Tincture ginger (U. S. P.).. $\frac{1}{2}$ ounce.

Pure strained honey..... 4 ounces.

Simple syrup..... 20 ounces.

Be sure the honey is pure and free from any impurity or contamination. No foam extract or acid solution is needed when honey is used.

4578. Ginger Ale Syrup.

Ginger ale..... 2 pints.

Essence lemon peel..... $\frac{1}{2}$ fl. ounce.

Citric acid solution..... $\frac{1}{4}$ fl. ounce.

One and one-half to two ounces of this in a glass with carbonated water, so that it has an inch of foam on its surface, will make a very satisfactory product.

4579. Grape Syrup.

Essence lemon..... 2 fl. drams.

Brandy.. 8 fl. ounces.

Tincture sandal wood..... 2 fl. ounces.

Simple syrup, sufficient to make..... 1 gallon.

Mix.

4580. Lemon Syrup.

One dozen select fruit may be cut and bruised in a wedgewood mortar, add 4 pints of hot water, let it stand at a very gentle heat for 20 minutes, add 6 pounds of sugar, dissolve the sugar, express and make up to 1 gallon by addition of thin syrup. This syrup must not be used with cream.

4581. Lemon Syrup.

Grate off the yellow rind of the lemons used and beat it with one-half its weight of granulated sugar in a wedgewood mortar. To each pint of the expressed juice add the same measure of water, and in this dissolve 3 pounds of granulated sugar, including what was used in beating with the rind, warm until solution is effected, avoiding excess of heat, and strain.

4582. Lemon Syrup.

Grate the peel of 12 lemons, add $\frac{1}{2}$ pint of water, heat nearly to the boiling point, compress and strain. Express the juice of the lemons from the peel, add enough simple syrup or rock candy syrup to make 1 gallon. If not sufficiently tart, add a small quantity of solution of citric acid.

4583. Lemon Syrup.

The peel of 10 or 12 fruits are bruised with one-half the weight of sugar in a wedgewood or brass mortar, and added to 1 gallon of simple or rock candy syrup, stand 2 to 4 hours and strain.

4584. Lemon Syrup.

The peels of lemons, thinly cut, are placed in suitable glass bottles, closely pressed and covered with cologne spirits, allowed to stand 10 days with frequent shaking, poured off, a second quantity of cologne spirits used in the same manner, obtaining as the product 1 pint from each pound of the peel. The essence thus made may be used in the proportion of 2 ounces to 1 gallon of plain syrup, or more, to suit the taste. Lemon syrup by formulas 4580, 4581 and 4582 cannot be used with cream, while 4583 or 4584 may be. If sour lemon is wanted, and formulas 4583 and 4584 are used for the syrup, then add from a bottle some lemon juice or solution of citric acid.

4585. Lemon Syrup.

Simple syrup..... 1 gallon.

Extract lemon..... $\frac{1}{2}$ ounce.

Citric acid..... 1 ounce.

4586. Lemon Syrup.

Grate off yellow rind of lemons and beat it up with sufficient granulated sugar. Express the lemon juice, add to each pint of juice 1 pint of water and 5 pounds of granulated sugar, including that rubbed up with the rind. Warm until dissolved, and strain.

4587. Lemon Syrup.

Dissolve 6 drams tartaric acid and 1 ounce gum arabic in pieces in 1 gallon simple syrup, then flavor with $1\frac{1}{2}$ fluid drams best oil of lemon, or if preferred, flavor with saturated tincture of the peel in cologne spirit.

4588. Lemon Syrup.

A popular method and a good one is: Take $4\frac{3}{4}$ pounds sugar, 1 pint water and sufficient fruit to yield 1 pint juice. Grate off the yellow rind of the fruit, beat it up with about three times its bulk of sugar and an ounce of alcohol, and pack lightly in a percolator. Pour on the water gradually until the sugar has been dissolved and passed through. Express the juice and mix with this solution; then add the remainder of the sugar, dissolve by agitation, without heat, and strain.

It is essential, in using oil of lemon, to see that it is perfectly fresh and good, as upon keeping it develops a terebinthinate odor and taste, which renders it unsuitable for use.

4589. Lemon Syrup.

Tincture of lemon..... 1 ounce.

Tincture of senega..... 20 drops.

Citric acid..... 2 drams.

Syrup 30 ounces.

Dissolve the acid in $\frac{1}{2}$ ounce of water, mix with the syrup, and add the tinctures.

4590. Lime Fruit Syrup.

Citric acid..... 3 ounces.
 Sugar 7 pounds.
 Boiling water..... 1 gallon.
 Coloring, q. s.

4591. Malto Syrup.

Simple syrup..... 20 fl. ounces.
 Solution of acid phosphates (N. F.)..... 2 fl. ounces.
 Essence of sarsaparilla.. 4 drops.

The essence of sarsaparilla is made as follows:

Oil of sassafras..... 30 minims.
 Oil of wintergreen..... 30 minims.
 Alcohol 6 fl. drams.

4592. Maple Syrup.

Use in preference the syrup that has not been made into sugar, and mix it with an equal bulk of simple syrup. When this cannot be done, use:

Maple sugar..... 3 pounds.
 Water..... 2 pints.

4593. Milk Punch Syrup.

Simple syrup..... 1 pint.
 Brandy 8 ounces.
 Jamaica rum..... 8 ounces.
 Cream syrup..... 1 pint.

4594. Syrup of Mountain Dew.

Syrup 1 gallon.
 Cream syrup..... 2 pints.
 Tincture 1 pint.

For the tincture:

Jamaica rum..... $\frac{1}{2}$ gallon.
 Essence cloves..... 2 ounces.
 Essence mace..... 2 ounces.
 Alcohol 4 ounces.

4595. Neetar Syrup.

Pineapple syrup..... 1 part.
 Lemon syrup..... 1 part.
 Vanilla syrup..... 3 parts.

4596. Neetar Cream Syrup.

Vanilla syrup..... 3 parts.
 Pineapple syrup..... 1 part.
 Simple cream syrup..... 1 part.

4597. Nerve Food Syrup.

Oil sassafras..... 15 minims.
 Oil wintergreen..... 15 minims.
 Alcohol 1 fl. ounce.
 Fluid extract gentian..... 1 fl. ounce.
 Syrup sarsaparilla compound, U. S. P..... 8 fl. ounces.
 Caramel 1 ounce.
 Syrup sufficient to make.. 5 pints.

Dissolve the oils in alcohol and add to the other ingredients, previously well mixed. Serve in mineral glasses, first drawing the glass two-thirds full of soda

water, then add $\frac{3}{4}$ to 1 ounce syrup and sufficient soda water to fill glass without undue foaming. This is identical in taste and appearance with "Moxie."

4598. Orange Syrup.

Extract orange..... 4 fl. drams.
 Solution citric acid (50 per cent)..... 2 fl. drams.
 Tincture quillaja..... 3 fl. drams.
 Raspberry syrup (prepared for fountain).... 4 fl. ounces.
 Simple syrup..... 1 quart.
 Mix.

4599. Orange Syrup.

Sweet orange peel, in moderately fine powder..... 16 ounces.
 Glycerine 3 ounces.
 Alcohol, sufficient quantity.
 Water, sufficient quantity.

Having mixed 14 fluid ounces alcohol with 2 fluid ounces glycerine, the peel is moistened in a porcelain mortar with 12 fluid ounces of this mixture. After standing 12 hours, percolation is proceeded with in the usual manner. The percolation is finished with a mixture of 2 parts alcohol and 1 part water. Reserving the first 14 ounces, add 1 fluid ounce of glycerine to the remainder, evaporate to $2\frac{1}{2}$ fluid ounces, which mix with the reserve portion.

Having extracted the virtue of the peel, express the juice of the peeled oranges by pressure and expose the same in an enameled pot to heat sufficient to bring it to a boil. This is afterward strained and sugar added to it in the proportion of 2 pounds of sugar to one pint of juice, which produces a so-called "concentrated syrup." A small quantity of boric and benzoic acids are added to prevent fermentation and keep the syrup from spoiling. For use, the concentrated syrup is reduced with plain syrup, and sufficient extract of the peel to give it the necessary flavor.

4600. Blood Orange Syrup.

Juice of fresh oranges..... 2 pints.
 Water 2 pints.
 Sugar 6 pounds.
 Cherry juice (to color, about)..... $\frac{1}{2}$ pint.
 Citric acid solution (1 part in 2)..... 1 fl. ounce.

4601. Orange (or Other) Phosphates.

Into a mineral water (7 or 8 ounces) glass draw 1 to $1\frac{1}{2}$ ounces of the specified fruit syrup, add 1 dram dilute phosphoric acid or phosphate solution, in another glass draw plain carbonic acid water and pour into the first tumbler or glass to fill it,

avoiding foam. This is preferable to making a long line of varying fruit phosphate syrups.

4602. Orgeat Syrup.

Cream syrup 8 fl. ounces.
Vanilla syrup 8 fl. ounces.
Essence bitter almond.... 1 fl. dram.

4603. Peach Syrup.

The pulp of ripe peaches is thoroughly disintegrated by a beater, adding an equal weight of water gradually, then passed through a moderately coarse strainer; to each quart add 3 pounds of sugar and dissolve.

4604. Phosphate Blood Orange.

Blood orange fruit juice
(of any good brand)..... 1 bottle.
Solution citric acid (1 to 16) 1 ounce.
Extract vanilla 2 ounces.
Extract lemon ½ ounce.
Foam 1 ounce.
Syrup, quantity sufficient,
ad 1 gallon.
Red coloring, quantity sufficient to suit.

4605. Pineapple Syrup.

Take a convenient number of pineapples, pare carefully and transfer them to a porcelain mortar, where they may be thoroughly mashed with a small quantity of sugar. Collect the juice, and for each quart take 1½ pints of water and 6 pounds of sugar. Make a syrup of the latter by boiling with stated amount of water and add to it the juice and usual amount of foam producer.

4606. Pineapple Syrup.

Essence pineapple 2 fl. ounces.
Solution citric acid (50
per cent) 1½ fl. ounces.
Simple syrup 1 gallon.
Mix.

4607. Polar Syrup.

Any good extract root beer. 4 ounces.
Any good extract ginger
ale 2 ounces.
Syrup 1 gallon.
Foam 1 ounce.

4608. Punch Syrup.

Deposit 8 ounces fresh lemon peel, cut in small pieces and bruised, in 12 ounces Jamaica rum for 3 days, and strain. Mix 28 ounces strained lemon juice with 68 ounces rum, allow it to settle and filter through paper. Dissolve 5 pounds powdered white sugar in 42 ounces rum at a gentle heat, and when cool mix all the liquids together. This is in no way inferior to the most celebrated European punch syrups.

4609. Raspberry Syrup.

Raspberry juice 32 fl. ounces.
Granulated sugar 3½ pounds.

Dissolve the sugar in the juice with the aid of heat; strain and transfer to a bottle labeled "Concentrated Syrup." To prepare for fountain use, add to one quart of above syrup 2 quarts of simple syrup and 3 fluid drams of good strawberry red color.

Pineapple syrup may be made in the same way by substituting pineapple juice for raspberry and omitting the coloring color.

4610. Raspberry and Strawberry Syrup.

Three quarts of fruit are pulped with an equal weight of sugar, heated by water bath in fruit jars and sealed. When wanted for use open this quantity, mix thoroughly with enough thin simple syrup to make 1 gallon and strain. When fruit juices or fresh fruit cannot be had and a fine quality of canned fruit is obtainable, the contents of a can can be pulped, heated gently and strained; if necessary it may have more sugar added to make a denser syrup to keep it better for stock, and when wanted for use dilute with water or thin syrup before placing in the fountain.

4611. Root Beer Syrup.

Root beer extract.... 1 to 2 fl. ounces.
Simple syrup, thin... 4 pints.
Caramel coloring to suit.

In the same way may be prepared mead, Ottawa beer, birch beer and similar syrups. The purchase of a good extract is preferable to making it unless large quantities are in demand.

4612. Root Beer Syrup.

Root beer extract.... 1 to 2 fl. ounces.
Simple syrup, thin... 4 pints.
Caramel coloring to suit.

4613. Sarsaparilla Syrup.

Essence sarsaparilla:.... 2 fl. drams.
Compound fluid extract
sarsaparilla 2 fl. drams.
Solution burnt syrup.... 3 fl. drams.
Simple syrup 32 fl. ounces.
Tincture quillaja 2 fl. drams.

4614. Sarsaparilla Syrup.

Simple syrup, thin.. 2 pints.
Caramel, to color.... ½ to 1 fl. ounce.
Sarsaparilla flavor-
ing 1 fl. dram.
Sarsaparilla flavoring.
Oil of wintergreen... 6 fl. drams.
Oil of sassafras..... 2 fl. drams.
Oil of cassia..... 1½ fl. drams.
Oil of clove..... 1½ fl. drams.
Oil of anise..... 1½ fl. drams.
Alcohol, to make.... 8 fl. ounces.

4615. Sarsaparilla Syrup.

Compound syrup sarsaparilla (U. S. P.)..... 4 fl. ounces.
 Simple syrup, thin..... 4 pints.
 Caramel 1 fl. ounce.
 Essence wintergreen..... 1 fl. dram.
 Essence sassafras..... 1 fl. dram.

4616. Sarsaparilla Syrup.

Syrup sarsaparilla 4 fl. ounces.
 Oil anise 8 drops.
 Oil sassafras 8 drops.
 Oil gaultheria 12 drops.
 Syrup 4 pints.
 Caramel, quantity sufficient.

4617. Sarsaparilla Syrup.

Essence sassafras 4 ounces.
 Essence wintergreen 4 ounces.
 Essence anise 2 ounces.
 Fluid extract sarsaparilla compound 4 ounces.
 Syrup 32 ounces.
 Caramel, to color.

4618. Sherbet Syrup.

Orange syrup,
 Pineapple syrup,
 Vanilla syrup, equal parts.

4619. Sherbet Syrup.

Sherry wine 1 gallon.
 Citric acid 1 ounce.
 Concentrated phosphoric acid 1 ounce.
 Syrup 10 pints.
 Water 8½ gallons.

4620. Phosphated Sherbet.

California orange wine.... 1 bottle.
 Wild cherry syrup..... 2 pints.
 Solution citric acid (1 to 16) 6 ounces.
 Simple syrup 4 pints.
 Solution gelatin 1 ounce.

4621. Strawberry Syrup.

Place 3,000 grams of ripe strawberries and 3,500 grams of powdered sugar in a broad-mouthed vessel. Thoroughly mash and mix together, close the jar tightly, put it away in a cool place for three days, frequently shaking it during this time, and finally strain off the syrup, using a large funnel in which a piece of clean flannel is placed. It requires about 36 hours for a syrup from 6 pounds of berries to pass through the filter in this way, and the operation should be done in a cool place. The syrup thus obtained is of splendid odor and flavor, though it will not keep very long.

4622. Strawberry Syrup.

Take fresh strawberries, 5 quarts; white sugar, 12 pounds; water, 1 pint. Sprinkle some of the sugar over the fruit in layers, and allow the whole to stand for several hours; express the juice and strain, washing out the pulp with water; add the remainder of sugar and water, bring the fluid to the point of boiling, and then strain. This will keep a long time.

4623. Strawberry Syrup Without the Fruit.

Add to 1 gallon of simple syrup 2 teaspoonfuls essence of strawberry and ¼ ounce tartaric acid. Color with coloring made as follows: Boil 1 ounce cochineal with one-half teaspoonful of cream of tartar. Strain.

4624. Vanilla Syrup.

Simple syrup, thin..... 4 pints.
 Extract vanilla 1 to 2 fl. ounces.

4625. Syrup of Violets.

Add a little strong tincture of orris root to water, render clear, or nearly so, by filtration through magnesium carbonate, and dissolve in the flavored water enough sugar to make a syrup. Tincture of grass may be used as a coloring if a green tint is desired.

4626. Syrup Wild Cherry.

*Elixir wild cherry..... 20 ounces.
 Syrup 1 gallon.
 Solution gelatin 1 ounce.
 *Elixir Wild Cherry (for above).
 Fluid extract wild cherry. 1 pint.
 Simple elixir (U. S. P.).... 1 gallon.

4627. Syrup Wild Cherry Phosphate.

Wild cherry syrup..... 6 pints.
 Grape syrup 1 pint.
 Sherry wine 1 pint.
 Acid solution of phosphates 8 fl. ounces.

Mix them.

The acid solution of phosphates is made as follows:

Potassium phosphate..... 80 grains.
 Magnesium phosphate.... 160 grains.
 Sodium phosphate..... 80 grains.
 Calcium phosphate..... 4 drams.
 Ortho phosphoric acid.... 8 fl. ounces.
 Water enough to make.... 8 pints.

4628. Fruit Mead Syrup, Pineapple.

Water 5 pints.
 Simple syrup 3 pints.
 Pineapple juice 1 pint.
 French rose water..... 1 pint.
 Mead extract 4 fl. ounces.
 Fruit acid solution..... ¼ ounce.

4629. Raspberry Mead.

Water	5 pints.
Syrup	3 pints.
Raspberry juice	1 pint.
Rose water	1 pint.
Mead extract	4 fl. ounces.
Fruit acid solution.....	¼ ounce.

The solution mead extract is prepared as follows:

Sarsaparilla	20 ounces.
Sassafras	6 ounces.
Jamalca ginger	2 ounces.
Cloves	2 ounces.
Allspice	2 ounces.
Bourbon vanilla	4 ounces.
Pure oil of lemon.....	1 fl. dram.
Pure oil of wintergreen...	½ fl. dram.
Pure oil of sassafras.....	¼ fl. dram.
Deodorized alcohol	½ gallon.
French sugar coloring....	½ pint.
Water sufficient to make.	1 gallon.

Grind all the drugs in an ordinary hand mill to a coarse powder, make for menstruum a mixture of the alcohol with ½ gallon of distilled water. Moisten the powder with a pint of the menstruum and pack in a water bath percolator; pour upon it 1 pint more of the menstruum and macerate four days, then heat moderately for two hours and begin to percolate, adding the remainder of the menstruum and continue percolation until exhausted; then withdraw the heat and add distilled water until 1 gallon of the fluid is obtained. Dissolve the oils in 1 ounce of alcohol and add to the percolate; then add the French sugar coloring, agitate well, and set aside for forty-eight hours, shaking several times a day; then filter.

The fruit acid is made as follows:

Citric acid	5 pounds.
Boiling water	1 gallon.

Two fluid ounces of this solution are equivalent to 1 ounce of acid. For dispensing, draw the glass from ⅓ to ½ full of the mead syrup and fill it up with soda water from the fountain. Various flavors may be given the mead syrup by substituting almost any of the common fruit juices for that of the pineapple or raspberry in the formulas given above.

4630. Extract Cascara Sagrada for Fountain.

Oil cinnamon, true.....	1 dram.
Oil cloves	2 drams.
Oil nutmeg	80 drops.
Tincture tolu	12 drams.
Tincture ginger	12 ounces.
Extract cascara, fluid,	
tasteless	16 ounces.
Carbonate of magnesium..	2 ounces.
Water enough to make...	4 pints.

Triturate the oils, tinctures and fluid extract with the carbonate of magnesium, gradually add water, and pass water through the filter to make 4 pints.

To make the syrup for the fountain, take

Cascara extract (as above).	6 ounces.
Flavoring extract orange...	2 ounces.
Syrup	1 gallon.
Solution gelatin or soap	
bark	1 ounce.

Color with caramel if necessary.

4631. Fruit Coloring.

While many use carmine or other artificial colorings, we suggest the use of German black cherry juice, of black raspberry juice and caramel as about all that are wanted or needed about a soda water counter.

4632. Red Coloring for Syrups.

Cochineal	1 ounce.
Alum	1½ drams.
Cream tartar	1½ drams.
Water, quantity sufficient.	
Alcohol	1 ounce.

Pulverize cochineal, add alum and cream tartar, gradually add 11 ounces of water, percolate through cotton, add alcohol and sufficient quantity of water to measure 1 pint.

4633. Soda Foam.

Sarsaparilla root,, fine	
ground	8 ounces.
Quillaja bark	8 ounces.
Diluted alcohol, to obtain..	4 pints.

Prepare by percolation.

Of this 1 to 2 ounces is sufficient to a gallon of syrup to produce an excellent foam. It is quite tasteless and entirely supersedes the use of gum, gelatin or egg albumen, which was formerly in vogue. Tincture quillaja (National Formulary, p. 147) or fluid extract quillaja can be purchased and may be used for the same purpose; the former may be used in the proportion of 1 ounce in 2 gallons of syrup, or fluid extract; 1 ounce is enough for 5 to 10 gallons.

4634. Soda Foam.

Ground soap bark.....	8 ounces.
Boiling water	½ gallon.
Let stand 24 hours and filter.	

4635. Peach Pulp.

Select ripe, freestone peaches; slice them up, skin and all, into a preserving pan; add a little water; place on the fire, and stir constantly until it is reduced to a pulp; rub and press this through a coarse hair sieve into an earthen or stoneware pan, and add a quarter of a pound of sugar for each pound of pulp. Complete as in the foregoing.

4636. Raspberry or Strawberry Pulp.

Take a quantity of thoroughly ripe fruit; rub or press the fruit to a pulp through a hair sieve into an earthen or stoneware pan; add a quarter of a pound of sugar for each pound of pulp; mix thoroughly, fill the bottles to the neck; cork and tie down; place them in a boiler of cold water, and put over the fire and boil gently for 20 minutes; when cold, seal and store away.

4637. Pineapple Pulp.

Peel and grate the pineapples to a pulp; to each pound add 4 ounces of sugar; mix until the sugar is thoroughly dissolved; fill the bottles, cork and tie down; finish as above.

4638. "Heading" or "Foam" for Ginger Ale.

Soap bark, coarse powder. 2 ounces.
Animal charcoal 1 ounce.
Macerate two days in
Alcohol 2 ounces.
Glycerine 2 ounces.
Distilled water 4 ounces.

Percolate to obtain 8 ounces of finished product. Quantity to be used 2 drams to the gallon of concentrated ginger ale.

4639. Hot Soda, Beef and Celery.

Fluid extract of beef..... 8 ounces.
Hot water 1 pint.
Extract of celery..... 1 dram.
Caramel 1 dram.

Mix beef in hot water, add celery and color, use a shaker top in the bottle, as there is a sediment in the beef extract which necessitates shaking. In a six or seven ounce cup shake about 2 teaspoonfuls of the beef extract prepared as above, draw on this sufficient hot water, add salt to suit taste, stir with a spoon, shake a little white pepper on top.

4640. Hot Chocolate.

Mix together 5 ounces of sugar, 8 ounces of chocolate, and 1½ pints of water, and boil in a water bath for half an hour, then add enough water to make the mixture measure 1½ pints. Three or four tablespoonfuls of this preparation to one tablespoonful of prepared milk are placed in a soda cup with two tablespoonfuls of whipped cream. The soda is then drawn down another cup and set into a cup with a tablespoonful of whipped cream, heat and the whole is stirred from the bottom only.

4641. Hot Chocolate.

Powdered chocolate..... 4 ounces.
Powdered sugar..... 16 ounces.

Mix thoroughly and transfer to wide-mouthed bottle or can. Add two teaspoonfuls of the mixed powder to each cup; add the hot water slowly, and with constant stirring.

4642. Hot Chocolate.

Powdered chocolate..... 8 ounces.
Condensed milk..... 16 ounces.
Granulated sugar..... 1 pound.
Extract vanilla..... 1½ fl. ounces.
Whites of eggs..... 2

Rub the chocolate up with sufficient hot water to form a smooth paste and add to remainder of water, in which has been dissolved the other ingredients. Pour about 1 fluid ounce of this syrup in a hot soda water mug and fill the latter to the brim with hot water. Serve with a spoon.

4643. Clam Bouillon.

Clam water 1 ounce.
Hot water,
Milk, of each, enough.
Salt and pepper to suit taste.

4644. Clam Juice.

Concentrated clam juice.. 1½ ounces.
Hot milk 2 ounces.
Hot water 4 ounces.

One pinch of salt and a little pepper for each cup. Always use white pepper.

4645. Ox Celery.

Maranta 2 av. ounces.
Extract beef 16 av. ounces.
Salt 4 av. ounces.
Extract celery 2 av. ounces.
Extract savory 1½ ounces.
Hot water 1 gallon.

Tincture capsicum may be added if desired, or a few drops put in the mug when drawn.

4646. Ice Cream.

Dissolve 5 teaspoonfuls of Oswego starch or arrow root in a teacup of milk. Add to it the whites of 3 eggs well frothed, and the yolk of one well beaten, sweeten and boil half a gallon of new milk. As soon as it begins to boil, pour it in small quantities over the mixture of eggs and starch till about half the milk is taken out of the kettle. Then pour all back into the kettle and stir a few moments. After it cools add one quart of rich cream; flavor to suit and freeze.

4647. Ice Cream.

One quart of milk, two eggs, one teaspoonful of cornstarch, one teaspoonful of arrowroot, a small lump of butter, flavor and freeze.

4648. Ice Cream.

Soak $\frac{1}{2}$ package of Cox's gelatin in a pint of milk; boil 3 pints of milk, and while hot pour on the gelatin, stirring till dissolved; when cold add 2 quarts of cream, sweeten and flavor to taste, then freeze.

4649. Ice Cream.

Milk, 6 quarts; Oswego cornstarch, $\frac{1}{2}$ pound. First dissolve the cornstarch in 1 quart of the milk, then mix all together and just simmer a little (not to boil); sweeten, flavor to taste and freeze.

4650. Ice Cream.

Irish moss, $1\frac{1}{2}$ ounces; milk, 1 gallon. First soak the moss in a little cold water for an hour, and rinse well to clear it of sand and a certain peculiar taste; then steep it an hour in milk just at the boiling point, but not to boil; it imparts a rich color and flavor without eggs or cream.

FLAVORING EXTRACTS.

4651. General Flavoring Extract.

Oil of bitter almonds (freed from hydrocyanic acid)... 8 drops.
 Essence of lemon..... 12 drops.
 Oil of cinnamon..... 8 drops.
 Oil of nutmegs..... 4 drops.
 Highly rectified spirit..... 1 ounce.
 A few drops to be added to puddings, custards, etc.

4652. Flavoring Extracts Allspice.

Oil of pimento or allspice 1 fl. ounce.
 Alcohol, q. s. to..... 1 pint.
 Agitate until perfectly united, and the next day decant the clear portion, if there is any sediment. Used by cooks and confectioners as flavoring.

4653. Almond Flavor for Ice Creams, Etc.

Almonds 2 ounces.
 Sugar 1 pound.
 Water $1\frac{1}{2}$ pounds.
 Juice of 2 lemons.
 Blanch the nuts and run them through cold water; pound them and keep them moist with water, so they will not turn to oil. Put this paste into the syrup of the sugar and water, and squeeze in the juice of 2 lemons. Strain.

4654. Flavoring Extract Banana.

Banana fruit (peeled)..... 1 pound.
 Alcohol 1 pint.
 Water 1 pint.
 Macerate for 14 days; express and strain.

4655. Flavoring Extract Banana.

This is usually made of mixtures of other flavoring extracts.

A satisfactory formula is as follows:

Flavoring extract pineapple... $\frac{1}{2}$ fl. ounce.

Flavoring extract vanilla... $\frac{1}{2}$ fl. ounce.

Flavoring extract strawberry
 (uncolored)..... 15 fl. ounces.

Mix, and, if necessary, filter through a little carbonate of magnesium, and color with a mixture of cochineal color and tincture of curcuma.

4656. Beef Tea Extract.

Extract beef..... 5 ounces.

Hot water 1 pint.

Tincture black pepper..... 1 ounce.

Mix beef in hot water, then add the tincture; use of this 2 drams or 2 teaspoonfuls to each cup, and fill with hot water. Salt to suit the taste. The tincture of black pepper is made as follows:

Whole black pepper,
 crushed..... 3 ounces.

Alcohol 1 pint.

Steep and filter. The object of this method is to keep the tea clear of sediment.

4657. Flavoring Extract Blackberry.

Blackberries (fresh fruit).. 32 ounces.

Alcohol 10 ounces.

Water 26 ounces.

Macerate for 14 days; express and strain through muslin.

4658. Flavoring Extract Black Pepper.

Recently powdered black
 pepper..... 2 ounces.

Alcohol,

Water,

Of each a sufficient amount.

Pack the powder in a percolator prepared for percolation. Cover with alcohol (using about 20 fluid ounces), and when the percolate appears close the exit of the percolator and macerate for a period of 24 hours. Then percolate slowly until 1 pint of percolate is obtained.

The strength may be increased or diminished to suit the taste of the operator, the quality desired governing in this direction. The diluted alcohol may also be replaced with alcohol to advantage, if the question of economy is not a factor.

4659. Flavoring Extract Cacao.

Deodorized alcohol..... 500 parts.

Proof spirits..... 100 parts.

Powdered cacao..... 300 parts.

Powdered vanilla..... 50 parts.

Powdered cinnamon..... 45 parts.

Ambergris 5 parts.

Macerate for two weeks, express and filter.

4660. Flavoring Extract Calamus.

Deodorized alcohol..... 500 parts.
 Proof spirits..... 300 parts.
 Oil of calamus..... 100 parts.
 Carbonate of magnesla..... 100 parts.

4661. Flavoring Extract Cascarella.

Ground cascarella bark..... 1 ounce.
 Diluted alcohol..... 16 ounces.
 Macerate 3 days and filter.

4662. Flavoring Extract Celery.

Celery seed..... 2 ounces.
 Alcohol, q. s.

Powder the celery seed in an iron mortar, and pack the mixture in a percolator prepared for percolation. Cover with alcohol (using about 20 fluid ounces), and when the percolate appears close the exit of the percolator and macerate for a period of 24 hours. Then percolate slowly until 1 pint of percolate is obtained. The strength may be increased or diminished to suit the taste of the operator, the quality desired governing in this direction.

4663. Flavoring Extract Cinnamon.

Bruised cinnamon 2 drams.
 Oil of cinnamon 1 dram.
 Highly rectified spirits.... 3 ounces.
 Digest and strain.

4664. Flavoring Extract Cloves.

Oil of cloves..... 2 fl. drams.
 Freshly powdered cloves... 2 ounces.
 Alcohol, a sufficient quantity.

Rub the oil with the powdered cloves and pack the mixture in a percolator prepared for percolation. Cover with alcohol (using about twenty fluid ounces), and when the percolate appears close the exit of the percolator and macerate for a period of twenty-four hours. Then percolate slowly until one pint of percolate is obtained.

4665. Flavoring Extract Coriander.

Deodorized alcohol..... 500 parts.
 Proof spirits..... 400 parts.
 Oil of coriander..... 50 parts.
 Carbonate of magnesia.... 50 parts.
 Color lightly with caramel.

4666. Flavoring Extract Curry.

Oil black pepper..... 2 drams.
 Oil coriander 2 drams.
 Oil caraway..... 1 dram.
 Oil cloves 1 dram.
 Oil cardamon..... 30 drops.
 Extract ginger 6 ounces.
 Extract capsicum 4 ounces.
 Tincture turmeric 6 ounces.
 Mix and filter.

4667. Flavoring Extract Curry.

Curry powder..... 4 ounces.
 Diluted alcohol..... 16 ounces.
 Macerate three days and filter.

4668. Fruit Flavors (French Fruit Juices).

Make a pulp of select fruit; squeeze it out through a fine sieve into a bottle, filling it to the shoulder; cork tight, and fasten the cork with wire. Put in a vessel of boiling water and boil for half an hour. Let the cooling take place in the water, and then cork. Wax the cork. Keep cool in the dark. When opened, use instantly.

4669. Flavoring Extract Ginger.

Soluble essence of ginger.. 18 ounces.
 Essence of vanilla..... 1 dram.
 Tincture of fresh lemon
 peel 1 ounce.
 Tincture of capsicum..... 4 drams.
 Burnt sugar 3 drams.
 Mix, and allow to stand till clear.

4670. Extract Jamaica Ginger.

Jamaica ginger (ground).. 2 pounds.
 Pumice stone (powdered).. 2 ounces.
 Lime (slaked) 2 ounces.
 Dilute alcohol, sufficient to
 make 4 pints.

Rub the ginger with the pumice stone and lime, thoroughly mixed; then moisten with dilute alcohol until perfectly saturated; place the mixture in a narrow percolator, being careful not to use any force in packing; simply place it to obtain the position of a powder required to be percolated, so that the menstruum will go through uniformly; lastly, add dilute alcohol and proceed until four pints of the percolate are obtained; allow the liquid to stand for 24 hours and filter if necessary.

4671. Extract, Ginger, Soluble.

Fluid extract of ginger
 (U. S. P.) 4 fl. ounces.
 Magnesium carbonate,
 Water,
 Alcohol, of each a sufficient amount.

Evaporate the fluid extract to 1 fluid ounce, add enough magnesium carbonate to form a creamy mixture, then water to bring to the measure of 8 fluid ounces, rubbing well together, and filter. To the filtrate add enough alcohol to make a total of 16 fluid ounces. Color, if desirable, with caramel.

See also formula in National Formulary No. 242.

4672. Ginger Ale Extract.

To be dispensed from the soda fountain it is necessary to produce, first, a ginger extract which shall be soluble and afford

no precipitation upon admixture with carbonated water. Possibly the best method of preparing such an extract is the following, which produces an article as strong as possible, compatible with its solubility, possessing a fine aroma peculiar to Jamaica ginger and perfectly free from capsicum: Shake together ginger in coarse powder, $1\frac{1}{2}$ pounds; and alcohol, 60 per cent, 2 pints and 5 ounces; water, 15 ounces; repeating the shaking frequently during ten days. Then percolate, press and filter, the product being about 45 ounces. Take 40 fluid ounces of this tincture, 40 ounces of water, and mix. Add to it $\frac{3}{4}$ of an ounce of phosphate of soda dissolved in 5 ounces of boiling water and allowed to cool. Shake well. Next add $\frac{1}{4}$ ounce of fine calcium chloride, dissolved in 5 ounces of nearly cold water. Shake well and allow to stand twelve hours and filter. The filtered solution is placed in a still and distilled at a very low temperature, reserving the first 30 ounces for further use. Distill a further quantity of 40 fluid ounces, and allow the still to cool. The residue in the still, which will be about 18 fluid ounces, is what is required, and is gotten out by rinsing the still with the 30 ounces first reserved.

4673. Flavoring Extract Lavender.

Deodorized alcohol 500 parts.
 Proof spirits 300 parts.
 Oil of Mitcham lavender.. 100 parts.
 Carbonate of magnesia.... 100 parts.
 Color with red tincture.

4674. Soluble Extract Lemon.

Oil of lemon (fresh)..... $1\frac{1}{4}$ ounces.
 Carbonate of magnesium $1\frac{1}{2}$ ounces.
 Alcohol 12 ounces.
 Water, quantity sufficient to make..... 32 ounces.

Dissolve the oil in the alcohol and rub it with the carbonate of magnesia in a mortar: Pour the mixture into a quart bottle, fill the bottle with water, and allow to macerate a week or more, shaking every day. Then filter through paper to make the product measure 2 pints.

One-half strength of concentrated extract lemon, and makes a clear liquid with syrup and aqueous liquids. Can dilute with water to any extent, mixed with 25 per cent alcohol.

4675. Flavoring Extract Lemon.

Oil lemon, fresh..... 8 ounces.
 Grated peel 6 lemons.
 Alcohol 1 gallon.
 Macerate 14 days and filter.

4676. Flavoring Extract Lemon.

	1	2	3
Fresh oil of lemon.	3 ozs.	8 ozs.	8 ozs.
Freshly grated lemon peel	2 ozs.	4 ozs.	4 ozs.
Oil lemon grass (fresh)	—	—	60 dps..
Alcohol	2 pts.	8 pts.	7 pts.
Water (boiled).....	—	—	1 pt.

4677. Flavoring Extract Lemon.

Grate off the outer rind of four lemons. Put this into a wide-mouthed bottle and pour upon it a pint of alcohol and add thereto one-half fluid ounce of fresh oil of lemon. Macerate, with occasional shaking, for four days and filter. Color the filtrate to suit the taste with a sufficient amount of tincture of curcuma.

4678. Flavoring Extract Lime Fruit.

Deodorized alcohol..... 500 parts.
 Proof spirits..... 250 parts.
 Oil of lime fruit..... 100 parts.
 Carbonate of magnesia.... 100 parts.
 Pineapple ether 50 parts.
 Color lightly with tincture of curcuma.

4679. Flavoring Extract Mace.

Mace, moderately fine..... 6 ounces.
 Alcohol 32 ounces.
 Macerate for 14 days; express and filter through paper.

4680. Flavoring Extract Mead.

Ground mace 8 ounces.
 Ground cinnamon 8 ounces.
 Ground black pepper..... 8 ounces.
 Ground nutmegs..... 4 ounces.
 Ground cloves 4 ounces.
 Dilute alcohol 1 gallon.
 Macerate 30 days, and filter.

4681. Flavoring Extract Nectarine.

Flavoring extract lemon. 4 fl. ounces.
 Flavoring extract bitter almonds..... 2 fl. ounces.
 Flavoring extract orange. 4 fl. ounces.
 Flavoring extract rose... 2 fl. ounces.
 Flavoring extract vanilla 4 fl. ounces.
 Cochineal color, a sufficient amount.
 Mix the extracts and color to suit the taste with cochineal color.

The proportions of the ingredients of this extract may be varied, if the operator desires, for the combination is purely fanciful.

4682. Flavoring Extract Orange.

Add 1 fluid ounce of sweet oil of orange to 15 fluid ounces of alcohol, and color the mixture to suit the taste with tincture of curcuma modified with a little cochineal color. The shades of the mixture may be regulated by the amount of curcuma tincture and cochineal used.

4683. Flavoring Extract Nutmeg.

Oil of nutmeg..... 2 drams.
 Alcohol of 95 per cent..... 8 ounces.
 Mix and filter.

4684. Cheap Flavoring Extract Orange.

Cover the peelings of oranges with alcohol, and after 8 or 10 days filter the liquid. This furnishes an extract of orange that, while it is made from the fruit, is much inferior to that made from a good quality of oil of orange.

4685. Flavoring Extract Peach.

Bruised peach pits..... 4 drams.
 Oil of bitter almonds..... 2 drams.
 Diluted alcohol..... 16 ounces.
 Macerate 48 hours and filter.

4686. Flavoring Extract Pineapple.

Grated pineapple..... 16 ounces.
 Alcohol..... 6 ounces.
 Macerate 48 hours in a covered vessel, and strain, adding enough water through the strainer to make the liquid measure 1 pint.

4687. Flavoring Extract Pistachio.

Macerate the crushed nuts with diluted alcohol, adding for every pound of the nuts used, $\frac{1}{2}$ ounce each of cinnamon and cloves and a few pieces of lemon peel. After macerating for 8 days, filter or percolate.

4688. Flavoring Extract Quince.

Deodorized alcohol..... 500 parts.
 Proof spirits..... 200 parts.
 Pure quince juice..... 160 parts.
 Quince ether..... 100 parts.
 Carbonate of magnesia..... 20 parts.
 Oil of cinnamon..... 10 parts.
 Oil of cloves..... 10 parts.
 Color with tincture of saffron.

4689. Flavoring Extract Raspberry.

Upon 50 pounds of the fresh and cleaned berries pour 14 gallons of 85 per cent alcohol. Let it stand for 24 hours, then add about 6 gallons of water, and distill off 13 gallons.

4690. Flavoring Extract Raspberry.

Fluid extract of orris root 2 fl. ounces.
 Acetic ether..... $\frac{1}{2}$ fl. ounce.
 Oil of cognac..... 10 drops.
 Butyric ether..... 5 drops.
 Diluted alcohol..... 16 fl. ounces.
 Mix the ingredients, color to a dark red with tincture of cochineal, and after a few days filter, if necessary.

4691. Flavoring Extract Rose.

Red rose leaves..... 2 ounces.
 Oil of rose..... 1 dram.
 Alcohol 2 pints.

4692. Flavoring Extract Rose.

Deodorized alcohol 500 parts.
 Proof spirits 300 parts.
 Extract of rose geranium.. 190 parts.
 Otto of roses..... 5 parts.
 Carbonate of magnesia..... 5 parts.
 Color with tincture of alkanet.

4693. Flavoring Extract Sarsaparilla.

One pound sarsaparilla, 4 pints boiling water; digest 2 hours; bruise the root, boil for two hours, filter and express the liquid; repeat the decoction with 2 pints of water, as before; evaporate the mixed liquids to the consistence of a thin syrup and when cold enough add sufficient alcohol to make up to 16 fluid ounces.

4694. Flavoring Extract Sarsaparilla.

Sarsaparilla $3\frac{1}{2}$ pounds.
 Distilled water 3 gallons.
 Boil to 12 pints, pour off the liquor and strain while hot; again boil the sarsaparilla in 2 gallons water to half and strain; evaporate the mixed liquors to 18 fluid ounces; when cold add 2 fluid ounces rectified spirit.

4695. Flavoring Extract Sarsaparilla for Soda.

Powdered extract licorice. 2 ounces.
 Oil wintergreen 40 drops.
 Oil sassafras 60 drops.
 Fluid extract sarsaparilla. 2 fl. ounces.
 Liquor caramel 4 fl. ounces.
 Diluted alcohol 10 fl. ounces.
 Macerate 48 hours, and filter. One ounce of this extract to one pint of syrup produces a satisfactory flavor.

4696. Flavoring Extract Sassafras.

Oil of sassafras 4 drams.
 Ground sassafras bark.... 1 ounce.
 Alcohol 16 ounces.
 Macerate three days and filter.

4697. Spirit of Savoury Spices.

Black pepper..... 1 ounce.
 Allspice $\frac{1}{2}$ ounce.
 Nutmeg $\frac{1}{4}$ ounce.
 Bruise them and infuse in 16 fluid ounces of brandy for 10 days.

4698. Flavoring Extract Strawberry.

Bruise $4\frac{1}{2}$ pounds of strawberries; pour 3 quarts of alcohol over the mass, let it stand for some time and filter. The product will make about a gallon of the extract.

4699. Flavoring Extract Strawberry.

Strawberries, crushed 16 ounces.
 Alcohol 6 ounces.
 Macerate 48 hours in a covered vessel.

4700. Spirit Soup Herbs.

Lemon thyme 1 ounce.
 Winter savory 1 ounce.
 Sweet marjoram 1 ounce.
 Sweet basil 1 ounce.
 Grated lemon peel..... ½ ounce.
 Shallots ½ ounce.
 Celery seed 1 dram.
 Infuse in a pint of brandy for 10 days.

4701. Flavoring Extract Tonka.

As a flavoring, extract of tonka is never sold as such in the market, but is used extensively to adulterate the extract of vanilla, some of the cheaper grades of which are entirely composed of it.

Tonka 1 ounce.
 Balsam Peru ¼ ounce.
 Sugar,
 Alcohol,
 Water, of each a sufficient quantity.

Reduce the beans and balsam of Peru to a powder with magnesium carbonate, gradually add the sugar to absorb the juice. Transfer to a percolator and cover with dilute alcohol. When the liquid appears at the exit, cork the percolator and allow the maceration to progress for a period of 24 hours. Then remove the stopper and allow the percolation to progress slowly until one pint of tincture is obtained.

4702. Flavoring Extract Tonka.

Tonka 10 ounces.
 Prunes, freed from the
 seeds 1 pound.
 Raisins 4 ounces.
 Currants 3 ounces.
 Balsam Peru 3 ounces.
 Orris root, powdered..... 4 ounces.
 New Orleans molasses.... 1 quart.
 Alcohol,
 Water, of each sufficient.

Bruise the tonka beans and digest for two or three hours in one quart of hot water. Cut the fruits small and cover them with a mixture of water, 1 gallon; alcohol, 5 pints. To this add the tonka (both beans and liquid), macerate for ten days, add the balsam and filter. Lastly, add enough diluted alcohol to make the extract measure 2½ gallons and color with caramel.

4703. Flavoring Extract Vanilla.

Take one pound of vanilla beans, long, of good flavor, cut into small pieces and bruise in a mortar; macerate the same in one pint of diluted alcohol, U. S. P., '80, shaking occasionally for two weeks, then transfer to a percolator and add gradually diluted alcohol sufficient quantity to make two pints of finished extract.

4704. Flavoring Extract Vanilla.

Vanilla bean 5 pounds.
 Alcohol 5 gallons.
 Water 3 gallons.
 Cut the beans in a sausage mill.

4705. Flavoring Extract Vanilla.

Vanilla, good quality, 1 ounce, cut into small pieces and triturate with 2 ounces coarse granulated sugar. Place in a percolator and throw on dilute alcohol until a pint of tincture has passed, add this to 1 pint simple syrup and mix.

4706. Flavoring Extract Vanilla.

Four ounces of Mexican vanilla beans, cut small, and granulated sugar are rubbed up thoroughly together, then moistened with 50 per cent alcohol, packed in a percolator, macerated 24 hours, and then displaced at the rate of 30 drops per minute until 4 pints of extract are obtained.

4707. Flavoring Extract Vanilla.

Vanilla 1 ounce.
 Carbonate of potash..... 20 grains.
 Boiling water 2 ounces.

Cut the vanilla small, dissolve the potash in the water and pour upon the vanilla contained in a gallipot. Cover and set aside until cold. Then transfer to a bottle and add

Musk 1 grain.
 Rectified spirit 14 ounces.

Macerate four days, filter and wash the filter with rectified spirits to 16 ounces.

4708. Flavoring Extract Vanilla.

Vanilla bean 1¼ pounds.
 Tonka beans 2 pounds.
 Alcohol 5 gallons.
 Water 3 gallons.

4709. Flavoring Extract Vanilla.

Vanilla ¼ ounce.
 Tonka ¼ ounce.

Sugar, water, alcohol, of each a sufficient quantity.

Reduce the beans to a powder, with sugar gradually added to absorb the juice, pack in a prepared percolator, and extract with dilute alcohol, making one pint of the extract.

**4710. Flavoring Extract Vanilla
(With Tonka).**

Vanilla beans in small pieces, 3 ounces, rubbed up in a mortar with two or three times its bulk of sugar, and then 6 ounces of tonka beans in fine powder added and the whole mixed, packed firmly in a percolator without moistening, and then percolate with a mixture of 3 quarts of water and 1 quart alcohol.

**4711. Flavoring Extract Vanilla
(Without Vanilla).**

Ten ounces bruised tonka beans digested for two hours in a quart of hot water. Then take 1 pound of prunes (freed from the seeds), 4 ounces raisins, 3 ounces currants, all cut small, and 4 ounces powdered orris root. Cover with a mixture of 5 pints of alcohol and 1 gallon of water. To this add the tonka, both the beans and the liquid, macerate for 10 days, add 3 ounces balsam of Peru and 1 quart New Orleans molasses, filter, lastly add enough dilute alcohol to make the measure up to 2½ gallons. Color with solution of caramel if desired.

4712. Flavoring Extract Vanilla.

Vanilla, fine..... ½ ounce.
Sugar, about..... ½ ounce.
Alcohol,
Water,

Of each a sufficient quantity.

Cut the vanilla beans transversely into thin slices, place in an iron mortar, and by concussion, gradually adding sugar to absorb the juice, crush the bean until reduced to the condition of a coarse powder. Prepare a percolator for percolation, introduce the powder in the usual manner, press gently, and cover with dilute alcohol (about 20 fluid ounces). When the liquid appears at the exit, cork the percolator and allow maceration to progress for a period of 24 hours. Then remove the stopper and allow the percolation to progress slowly until 1 pint of tincture is obtained.

4713. Flavoring Extract Vanilla.

Prime vanilla bean..... 4 ounces.
Tonka bean..... 2 ounces.
Glycerine 8 ounces.
Alcohol 3 pints.
Water 1½ pints.

4714. Root Beer Extract.

Percolate the following with a menstruum of 3 volumes of alcohol to 5 volumes of water until exhausted:

Sassafras 1 ounce.
Yellow dock..... 1 ounce.
Wild cherry bark..... ½ ounce.
Allspice 1 ounce.
Wintergreen 1 ounce.
Hops ¼ ounce.
Coriander seed..... ½ ounce.

To the percolate add 1 pint of yeast and sufficient water to make 6 gallons, and allow to ferment in a warm place. Or a fluid extract of the above can be made of ½ the strength of the drug, and 2 ounces of the extract used for preparing a gallon of beer.

4715. Root Beer Extract.

Fluid extract of American sarsaparilla..... 10 fl. drams.
Fluid extract of pipsissewa 10 fl. drams.
Fluid extract of wintergreen 4 fl. drams.
Fluid extract of licorice 4 fl. drams.
Oil of wintergreen..... 48 minims.
Oil of sassafras..... 24 minims.
Oil of cloves..... 12 minims.
Alcohol..... 10 fl. ounces.

Mix 9 gallons of warm water, 1 gallon of refined molasses and 1 quart of yeast, add the above "extract," and set aside in a warm place to ferment. This is said, also, to give satisfaction if the yeast and fermentation are omitted and the ingredients drawn from an ordinary soda fountain well charged with gas.

4716. Root Beer Extract.

In a suitable vessel place 5 drams each of Prince's pine, dandelion root, sassafras, American sarsaparilla, Jamaica ginger, hops, add 3 gallons boiling water, and keep covered and hot, but not boiling, for 3 hours; cool partially; strain through a cloth and add 5 pounds of white or coffee sugar (or 5 pints molasses or syrup). When dissolved, transfer to a large jar and make up to 5 gallons with water. Add ½ pint fresh brewer's yeast (or sufficient compressed yeast), stir, allow to remain in a moderately warm place, and in from 24 to 72 hours it will be fit for use. The beaten white of 1 or 2 eggs or a little isinglass is often employed for clarifying.

4717. Root Beer Extract.

Oil wintergreen..... 4 ounces.
Oil sassafras..... 4 ounces.
Oil anise..... 2 ounces.
Oil orange..... 2 ounces.
Oil nutmegs..... 4 drams.
Oil cloves..... 4 drams.
Tincture vanilla..... 1 pint.
Fluid extract sarsaparilla... 4 pints.
Fluid extract licorice..... 4 pints.
Fluid extract ginger..... 2 pints.
Fluid extract althaea..... 2 pints.
Fluid extract angelica..... 8 ounces.
Fluid extract soap bark.... 8 ounces.
Caramel 3 gallons.
Syrup 30 gallons.

A root beer easily prepared may be made by the addition of 1½ gallons of molasses to 5 gallons of boiling water. Allow to stand for 3 hours, then add bruised sassafras bark, wintergreen bark, sarsaparilla root, of each ¼ pound, yeast ½ pint and enough water to make 15 gallons. After this has fermented for 12 hours it can be drawn off and bottled.

MINERAL WATERS.

4718. Aix la Chapelle Water.

Bicarbonate of sodium...	1½ ounces.
Chloride of sodium.....	2¾ ounces.
Chloride of calcium.....	168 grains.
Sulphate of sodium.....	1¼ ounces.
Simple sulphuretted water.....	9 pints.
Water, carbonated.....	71 plnts.

4719. Apollinaris Water.

Sodium bicarbonate.....	1½ ounces.
Sodium chloride.....	1½ ounces.
Sodium sulphate.....	4 drams.
Magnesium carbonate.....	4 drams.

Put in a fountain with 10 gallons of water, and charge with gas.

4720. Apollinaris Water.

Sodium carbonate.....	2,835.27 grains.
Sodium sulphate.....	335.20 grains.
Sodium silicate.....	10.00 grains.
Magnesium chloride....	198.10 grains.
Calcium chloride.....	40.20 grains.
Potassa-alum	57.10 grains.
Magnesium carbonate, hydrated.....	158.50 grains.
Iron sulphate.....	21.30 grains.
Water.....	10 gallons.

Mix the first three ingredients with 10 times their weight of water, filter, and add to 9 gallons of water contained in the fountain; mix the next two ingredients with 10 times their weight of water, filter and add; then add the remaining ingredients each separately, dissolved in 10 times its weight of water, add sufficient water to make up to 10 gallons, and charge immediately with carbonic acid gas. The necessity for charging at once is because some of the substances are soluble only under pressure of carbonic acid, and even then only when freshly precipitated.

4721. Baden Water.

Magnesium chloride.....	160 grains.
Calcium chloride.....	3,200 grains.
Iron perchloride.....	20 grains.
Sodium chloride.....	2,400 grains.
Sodium sulphate.....	800 grains.
Sodium carbonate.....	80 grains.
Water, carbonated.....	10 gallons.

4722. Brighton Chalybeate Water.

Sulphate iron.....	160 grains.
Chloride sodium.....	160 grains.
Chloride calcium.....	160 grains.
Carbonate sodium.....	240 grains.
Carbonated water.....	10 gallons.

4723. Carlsbad Water.

Potassium sulphate.....	96 grains.
Sodium chloride.....	600 grains.
Sodium bicarbonate.....	1,700 grains.
Sodium sulphate, dried..	920 grains.
Calcium sulphate, precipitated	300 grains.
Magnesium sulphate, dried	128 grains.

To make 10 gallons. For one tumbler about 24 grains.

4724. Carlsbad Salts.

Potassium sulphate.....	2 parts.
Sodium chloride.....	18 parts.
Sodium carbonate (clear crystals)	61 parts.
Sodium sulphate (crystallized)	88 parts.
Distilled water	50 parts.

Dissolve the sulphate of potassium and chloride of sodium in the distilled water and add this solution to the other two salts previously melted in a tarred capsule and at a gentle heat in their own water of crystallization. Evaporate the mixture to about 180 parts and set aside to cool, with frequent stirring so as to prevent the formation of large crystals. Distribute any remaining water of crystallization uniformly over the crystals and dry cautiously by exposure to the air and so that it shall retain its water of crystallization; 27 grains of this salt in 6 fluid ounces of water contain the essential properties of an equal volume of Carlsbad water.

4725. Congress Water.

Chloride sodium	1½ ounces.
Tartrate potassium.....	½ ounce.
Bicarbonate of soda.....	½ ounce.
Carbonate of magnesia....	2 drams.
Chloride ammonia.....	1 dram.

Water to make 10 gallons; charge to 125 pounds.

4726. Contrexeville Water.

Bicarbonate of sodium.....	2 ounces.
Sulphate of sodium.....	6 ounces.
Sulphate of magnesium....	6 ounces.
Chloride of sodium.....	2 ounces.
Carbonic acid water.....	10 gallons.

4727. Eger Water.

Carbonate of sodium.....	400 grains.
Sulphate of sodium.....	12 ounces.
Chloride of sodium.....	800 grains.
Sulphate of magnesia.....	240 grains.
Chloride of calcium.....	400 grains.
Carbonated water	10 gallons.

4728. MINERAL WATERS—Computed from Analyses of the More Prominent Mineral Waters of Europe, and intended to give imitations of them for Dispensing Purposes. The quantities given are in grams, to produce in each case 50 liters and are as presented in Hager's Pharm. Praxis. As a rule, they are Carbonated to the extent of from 3 to 4 volumes, but can be drawn from the Fountain in the usual way under ordinary pressure. (Concluded on next page.)

	Potassium carbonate.	Sodium sulphate.	Sodium carbonate.	Sodium chloride.	Lithium chloride.	Sodium phosphate.	Sodium silicate.	Magnesium sulphate.	Sodium aluminium sulphate.	Calcium sulphate.	Iron sulphate.	Potassium sulphate.	Magnesium chloride.	Strontium chloride.	Aluminium chloride.	Calcium carbonate.
1—(1) Billn, Josephsquelle.....	5.05	4.30	174.25	18.00	0.85	0.60	3.25	10.25	0.85	34.10	1.25	11.29	8.81	0.05	0.20	19.95
2—(2) Billn, Josephsquelle.....	40.04	157.84	3.23	0.25	4.63	33.20	0.14	4.47	5.14
3—Cudowa, Trinkquelle.....	92.44	0.35	5.25	119.27	3.10	5.67	4.30
4—Drburg, Trinkquelle oder Eisenquelle.....	32.91	6.79	42.31	0.16	9.60	4.95	0.02
5—(1) Eger, Franzensbrunnen.....	157.5	48.00	39.7	0.26	6.26	0.16	3.67	4.95	0.02
6—(2) Eger, Franzensbrunnen.....	157.31	53.39	34.14	0.26	6.18	0.16	3.67	4.95	0.02	0.09
7—(3) Eger, Franzensbrunnen.....	130.57	45.29	45.91	0.20	0.18	6.48	7.43	0.16	1.09
8—(4) Eger, Salzquelle.....	116.59	50.58	42.40	0.027	4.36	0.25	0.018
9—(1) Ems, Kesselbrunnen.....	.15	0.04	87.20	32.31	0.08	4.82	0.31	2.36	6.97	0.011	0.065
10—(2) Ems, Kraenchen.....	0.75	80.38	37.0	0.026	5.00	0.04	0.19	2.14	7.30	0.0028
11—Friedrichshall, Bitterwasser.....	329.16	33.30	335.39	294.49	9.91	199.88
12—Homburg, Elisabethquelle.....	2.48	95.11	406.42	4.13	0.84	9.83	34.89	0.10	0.03
13—Karlsbad, in Boehmen.....	250.57	187.57	28.02	0.048	15.06	3.16	3.69
14—(1) Kissingen, Pandur.....	56.99	211.73	0.84	0.28	0.41	41.78	3.78	1.21
15—(2) Kissingen, Ragoczi.....	59.88	225.93	0.99	0.29	1.31	48.18	0.17	0.02	0.48	1.10
16—(1) Krakenhehl, Jodsodawasser.....	0.05	16.80	9.33	0.09	1.00	64.32	0.012	0.61	1.10	0.13
17—(2) Krakenhehl, Jodsodawasser.....	0.60	16.02	0.61	1.09	0.012	0.61	1.10
18—Lipspringe, Arminiusquelle.....	11.04	24.36	0.58	17.15	7.35	2.356	0.04
19—(1) Marlenbad, Ferdinandsbrunnen.....	279.94	125.48	67.52	0.514	0.228	32.55	0.18	4.23	31.25	24.54	0.04
20—(2) Marlenbad, Kreuzbrunnen.....	244.90	112.37	61.04	0.27	0.43	686.80	0.49	57.28	1.62	26.62	91.79
21—Pulna, Bitterwasser.....	729.12	42.80	746.28	0.08	0.562	1.92	1.27	0.16	10.24
22—Salzschütz, Bitterwasser.....	90.41	0.063	0.052	4.47	16.08	0.08	0.59	0.35
23—Salzbrunn(Ober-Salzbrunnen Schiesten).	70.26	0.03	3.27	12.5
24—Schlangenbad, im Nassau'schen.....	2.63	6.45	2.5	10.1	0.12
25—Selterser Wasser, Selterwasser.....	5.0	75.0	50.0	0.15	2.2	1.041	1.746
26—Soden, Milchbrunnen.....	0.07	31.15	78.47	0.363	8.515	4.635	0.256	0.654	2.55	0.21
27—Teplitz, Steinbadquelle.....	1.302	36.573	4.55	6.02	0.35	2.58	0.12
28—(1) Vichy, Source des Celestins.....	10.87	186.67	4.63	6.50	7.11	12.15	0.333	0.65
29—(2) Vichy, Source de la Grand Grille.....	12.11	177.41	5.90	0.08	1.58	0.24	1.72	0.06	24.58
30—Wetzbach.....	0.82	28.01	1.96	0.26	2.17
31—Wüdungen, Stadtbrunnen.....	4.82	0.46

The constituents of any of the following named mineral waters may be found by reading that part of the table upon the next page in connection with that given upon this page.

(Continued from preceding page.)

	Calcium chloride.	Sodium bromide.	Potassium chloride.	Manganous sulphate.	Sodium arseniate.	Hydrochloric acid.	Sodium iodide.	Ammonia bicarbonate.	Lithium carbonate.	Barium chloride.	Manganese carbonate.	Magnesium carbonate.	Dry ferric chloride.	Sodium fluoride.	Sodium nitrate.	Vol. carbonic acid gas.
1—(1) Billn, Josephsquelle.....	2.74	3-3½
2—(2) Billn, Josephsquelle.....	0.35	0.19	0.06	0.13	3
3—Cudowa, Trinkquelle.....	3-4
4—Driburg, Trinkquelle oder Eisenquelle.....	0.2	0.24	0.28	4-4½
5—(1) Eger, Franzensbrunnen.....	13.11	0.052	0.54	3.65	0.001	0.24	4
6—(2) Eger, Franzensbrunnen.....	13.17	0.07	4
7—(3) Eger, Franzensbrunnen.....	10.33	4
8—(4) Eger, Salzquelle.....	11.62	0.05	2.57	0.02	4
9—(1) Ems, Kesselbrunnen.....	9.10	0.012	3-3½
10—(2) Ems, Kraechen.....	8.65	0.003	0.035	2
11—Friedrichshall, Bitterwasser.....	55.75	6.38	3½
12—Homburg, Elisabethquelle.....	129.93	2.43	4.23	4
13—Karlsbad, in Bochemen.....	24.63	0.12	0.15	8.89	0.0013	0.26	0.34	3-3½
14—(1) Kissingen, Pandur.....	69.00	0.35	12.07	0.89	0.17	4
15—(2) Kissingen, Ragoczi.....	78.12	0.42	14.34	0.21	4.62	4
16—(1) Krankenheil, Jodschwefelwasser.....	3.91	0.006	3½
17—(2) Krankenheil, Jododwasser.....	3.52	0.008	0.53	0.075	3½
18—Lipspringe, Arminiusquelle.....	15.16	4
19—(1) Marienbad, Ferdinandsbrunnen.....	30.33	0.30	4
20—(2) Marienbad, Kreuzbrunnen.....	28.93	1.56	4
21—Pullna, Bitterwasser.....	19.53	0.0045	0.0008	3
22—Saldschutz, Bitterwasser.....	16.47	0.21	118.18	3
23—Salzbrunn(Ober-Salzbrunnen Schliesien).....	5.49	2½
24—Schlangenbad, im Nassau'schen.....	1.80	0.29	1.98	3½
25—Selterser Wasser, Selterwasser.....	25.0	3-4
26—Soden, Milchbrunnen.....	20.7	1.09	1.3	3½
27—Tepitz, Steinbadquelle.....	5.28	4
28—(1) Vichy, Source des Celestins.....	17.80	0.10	3½
29—(2) Vichy, Source de la Grand Grille.....	16.70	0.10	4
30—Weilbach.....	13.51	0.03	1.21	0.33	17.76	3
31—Wildungen, Stadtbrunnen.....	0.342	27.18	4

The constituents of any of the following named mineral waters may be found by reading that part of the table upon the preceding page in connection with that given upon this page.

4729. Ems Water (Kraenchen).

Sodium chloride..... 34. grams.
 Sodium bicarbonate..... 8.36 grams.
 Potassium sulphate..... 1.52 grams.
 Calcium sulphate, pre-
 cipitated 10.64 grams.
 Magnesium sulphate, dry 7.98 grams.
 For 10 gallons.

4730. Friedrichshall Bitter Water.

Potassium sulphate..... 3.8 grams.
 Sodium sulphate, dry... 152. grams.
 Sodium chloride 437. grams.
 Sodium bicarbonate..... 38. grams.
 Sodium bromide..... 5.32 grams.
 Calcium sulphate, pre-
 cipitated 62.7 grams.
 Magnesium sulphate,
 dry 505.4 grams.
 For 10 gallons.

4731. Geyser Springs Water.

Pulverized chloride of am-
 monia 2 drams.
 Bicarbonate of soda..... $\frac{1}{2}$ ounce.
 Sodium sulphate..... 1 ounce.
 Citrate lithia 4 grains.
 Mix.

Add water to make 10 gallons; charge to 125 pounds.

4732. Harrogate Water.

Chloride of sodium..... 100 grains.
 Chloride of calcium..... 10 grains.
 Chloride of magnesium.. 6 grains.
 Bicarbonate of sodium... 2 grains.
 Water $18\frac{1}{2}$ ounces.
 Dissolve and add simple sulphuretted water, $1\frac{1}{2}$ ounces.

4733. Hunyadi Janos Water.

Potassium sulphate..... 1 dram.
 Calcium sulphate..... $1\frac{1}{2}$ ounces.
 Magnesium sulphate..... 25 ounces.
 Sodium carbonate..... 20 ounces.
 Put in a fountain with ten gallons of water, and charge with gas.

4734. Hunyadi Janos Water.

Potassium sulphate..... 1.9 grams.
 Sodium chloride..... 53.2 grams.
 Sodium bicarbonate..... 197.6 grams.
 Sodium sulphate, dry.... 684. grams.
 Calcium sulphate, pre-
 cipitated..... 57. grams.
 Magnesium sulphate, dry 93.1 grams.
 Iron sulphate, dry..... .76 gram.
 For 10 gallons.

4735. Kissingen Water.

Chloride of sodium..... $2\frac{1}{2}$ ounces.
 Phosphate of soda..... 1 ounce.
 Carbonate of magnesia.... $\frac{1}{2}$ ounce.
 Sulphate of magnesia..... $1\frac{1}{2}$ ounces.
 Precipitated carbonate iron 2 drams.
 Triturate with 1 pint water, in large

wedgewood mortar; add water to make 10 gallons; charge to 125 pounds. Don't filter; the carbonic acid gas will clear the mixture.

4736. Marienbad Water.

Carbonate of sodium.... 3,200 grains.
 Sulphate of sodium..... 7,680 grains.
 Sulphate of magnesium.. 640 grains.
 Chloride of sodium..... 1,200 grains.
 Chloride of calcium..... 800 grains.
 Carbonated water..... 10 gallons.

4737. Mialhe's Aerated Chalybeate Water.

Water 1 pint.
 Citric acid..... 1 dram.
 Citrate of iron..... 15 grains.
 Dissolve, and add:
 Bicarbonate of sodium..... 75 grams.

4738. Mont d'or Water.

Bicarbonate of sodium.. 5,600 grains.
 Sulphate of iron..... 54 grains.
 Chloride of sodium..... 960 grains.
 Sulphate of sodium..... 40 grains.
 Chloride of calcium..... 320 grains.
 Chloride of magnesium.. 160 grains.
 Carbonated water..... 10 gallons.

4739. Naples Water.

Crystallized carbonate of
 sodium..... 1,200 grains.
 Fluid magnesia..... 80 ounces.
 Simple sulphuretted wa-
 ter..... 160 ounces.
 Carbonated water..... 10 gallons.

Introduce the sulphuretted water into the bottles last.

4740. Passy Water.

Sulphate of iron..... 160 grains.
 Chloride of sodium..... 240 grains.
 Carbonate of sodium..... 320 grains.
 Chloride of magnesium... 160 grains.
 Carbonated water..... 10 gallons.

4741. Pullna Bitter Water.

Sodium sulphate, dry.... 437. grams.
 Potassium sulphate..... 22.8 grams.
 Sodium chloride..... 95. grams.
 Sodium bicarbonate..... 64.5 grams.
 Magnesium sulphate, dry. 722. grams.
 Calcium sulphate, precip-
 itated..... 22.8 grams.
 For 10 gallons.

4742. Saratoga Water.

Chloride sodium..... 3 ounces.
 Carbonate magnesia..... 1 ounce.
 Bicarbonate of soda..... 2 ounces.
 Sulphate of soda..... $2\frac{1}{2}$ ounces.
 Water to make..... 10 gallons.
 Triturate first articles with $\frac{1}{2}$ gallon of water, add balance water; charge to 120 pounds.

4743. Pyrmont Water.

Lithium carbonate.....	.38 grams.
Sodium bicarbonate....	98.8 grams.
Sodium sulphate, dry...	129.2 grams.
Sodium chloride.....	319.2 grams.
Magnesium sulphate, dry.....	102.6 grams.
Calcium sulphate, pre- cipitated	91.2 grams.
Iron sulphate, dry.....	.456 grams.
For 10 gallons.	

4744. Seltzer Water.

Calcium chloride.....	1 ounce.
Bicarbonate of soda.....	1 ounce.
Chloride of sodium.....	1 ounce.
Sulphate of magnesia.....	1 ounce.
Mix, add water to make 10 gallons, and charge to 125 pounds.	

4745. Seltzer Water.

Sodium fluoride.....	0.15 grains.
Sodium phosphate.....	0.34 grains.
Potassium chloride....	28.6 grains.
Potassium sulphate....	31.8 grains.
Sodium silicate.....	49.1 grains.
Sodium carbonate.....	2,190.8 grains.
Sodium chloride.....	983.7 grains.
Barium chloride.....	0.19 grains.
Aluminum chloride....	0.27 grains.
Strontium chloride....	1.6 grains.
Calcium chloride.....	166.1 grains.
Magnesium chloride....	181.0 grains.
For 10 gallons of water. The first 7 arti- cles are dissolved in water, and the re- maining 5 are dissolved separately (filtered through absorbent cotton), the solutions are mixed, then the water added to make 10 gallons, and charged with carbonic acid gas.	

4746. Vichy Salts.

Bicarbonate of sodium..	2¼ ounces.
Muriate of sodium.....	22½ grains.
Effloresced sulphate of sodium.....	1½ drams.
Effloresced sulphate of magnesium.....	1½ scruples.
Dry tartarized sulphate of iron.....	1½ grains.
Dry tartaric acid, or dry bisulphate of soda.....	1½ ounces.
Mix the powders, previously dried, and keep in a well-corked bottle.	

4747. Vichy (Grande Grille) Water.

Potassium sulphate.....	30 grains.
Sodium chloride.....	34 grains.
Sodium bicarbonate.....	930 grains.
Magnesium sulphate, dried	10 grains.
Calcium sulphate, precipi- tated.....	64 grains.
Mix intimately. To make 10 quarts. For one tumbler, about 28 grains.	

4748. Wankesha White Rock Water.

	Grains in Imperial Gallon.
Sodium carbonate.....	1.28
Calcium bicarbonate.....	17.67
Magnesium bicarbonate.....	13.02
Iron bicarbonate.....	0.27
Sodium sulphate.....	1.09
Potassium sulphate.....	0.82
Sodium chloride.....	1.12
Aluminum oxide.....	0.75
Silica.....	1.04

4749. White Rock Water.

Sodium carbonate.....	31.9 grains.
Sodium sulphate.....	15.4 grains.
Sodium silicate.....	16.8 grains.
Potassium sulphate.....	6.6 grains.
Aluminum chloride.....	15.6 grains.
Iron sulphate.....	3.8 grains.
Calcium carbonate.....	93.2 grains.
Magnesium carbonate....	112.2 grains.
Carbonated water.....	10 gallons.
The first four ingredients are dissolved in about 10 times their weight of water; the aluminum chloride is dissolved sepa- rately in the same way; as is also the iron sulphate; the calcium and magnesium car- bonate should be freshly prepared and moist. The solutions, and the magma of carbonates are mixed separately with the water, which is then charged with carbonic acid in the usual manner.	

INKS.

4750. Alizarin Ink.

Indigotin	6 parts.
Pure water	388 parts.
Sugar	20 parts.
Solution of tersulphate of iron (U. S.)	62 parts.
Ink body (see below).....	600 parts.
Dissolve the Indigotin by one day's maceration in water. Then add sugar and tersulphate of iron and lastly the ink body, which is prepared as follows: Macer- ate 200 parts of coarsely powdered Chinese galls for 24 hours with 750 parts of distilled water, strain and express. Upon the resi- due pour 350 parts of boiling water and ex- press after one hour. Triturate 50 parts of white bole with the mixed, strained liquids, filter through flannel bags. Wash the lat- ter with water until the weight of the filtrate is 1,000 parts.	

In place of the ink body a solution of 60
parts of tannic acid in 540^v parts of water
may be used.

4751. Ink.

Boil 250 parts of pulverized gall-nuts,
125 parts of gum, and a like quantity of

sulphuric acid in 4,000 parts of distilled or rain water, and add a few grains of chloride of mercury.

4752. Ink.

The ink obtained by the following process becomes black at once, does not corrode the pen, and, when thick, can be diluted with water:

Convert into a coarse powder $\frac{1}{2}$ ounce of gall-nuts, and $\frac{1}{4}$ ounce of gum arabic, and $\frac{3}{4}$ pint of rain water. Let the whole stand in a flask for 24 hours, shaking it several times. Then add 7 grains of ferric oxide prepared in the following manner: Place 4 ounces sulphate of iron in an earthenware pot, and heat it over a strong fire until it forms a red mass, when it is allowed to cool and is stored away for future use. To prevent molding of the ink, add a few drops of creosote, or a few grains of corrosive sublimate.

4753. Ink, Black.

Calcined sulphate of iron. 1 ounce.
Gall-nuts $1\frac{1}{2}$ ounces.
Vegetable gum $\frac{1}{2}$ ounce.
Distilled water 1 pint.
Digest until dissolved.

4754. Ink, Black.

Logwood chips 1 pound.

Boil in $1\frac{1}{2}$ gallons of water until reduced to 2 quarts. Pour off and repeat as before. Mix, and add water to make 1 gallon in all; then add bichromate of potash, $\frac{1}{2}$ ounce; Prussian blue, $\frac{1}{2}$ ounce; prussiate of potash, $\frac{1}{4}$ ounce. Boil again 5 minutes, then strain and bottle.

4755. Ink, Black.

Convert into a coarse powder 1 pound of gall nuts, $\frac{3}{4}$ pound of sulphate of iron, and $3\frac{1}{2}$ ounces of gum arabic. Pour over these ingredients 1 quart of vinegar and $1\frac{3}{4}$ gallons of water. Let the mixture stand for 8 to 14 days, stirring frequently, and then pour off the ink.

4756. Ink, Black.

Sulphate of iron..... 1 ounce.
Logwood 1 ounce.
Gall nuts $3\frac{1}{2}$ ounces.
Gum arabic 1 ounce.

Pulverize each separately, mix, and add:
White wine (or acetic acid) 1 quart.

4757. Ink, Black.

Pulverized gall nuts..... 100 parts.
Sulphate of iron..... 250 parts.
Gum arabic 200 parts.
Water 6,000 parts.
Creosote, a few drops.

4758. Ink, Black.

Digest for 8 days 16 parts of bruised Aleppo gall nuts, 16 of sulphate of iron, 5 of gum senegal, and 1 of alum in 216 of vinegar; then add to the whole 36 parts more of vinegar and 200 of water.

4759. Ink, Black.

Boil repeatedly 100 parts of logwood with water. Pour the different decoctions together and reduce them by evaporation to 1,000 parts by weight. Dissolve in this liquid 1 part of neutral yellow chromate of potash, let it clear by standing, and draw the clear ink into bottles, which should be hermetically closed. This is a cheap and good ink, which flows freely from the pen, but spoils quickly if allowed to stand in open vessels.

4760. Ink, Black.

Extract logwood..... 15 parts.
Carbonate of sodium, crystallized 4 parts.
Neutral chromate potassium 1 part.
Water 1,000 parts.

Dissolve the extract in 900 parts of the water, allow it to deposit, decant, heat to boiling, and add the carbonate of sodium; lastly, dissolve the chromate of potassium in the remainder of the water, and add to the logwood solution drop by drop with constant stirring.

4761. Ink, Black.

Nigrosine 160 grains.
Distilled water..... 16 ounces.

4762. Black Ink for Writing on Leather.

(A) Nut galls 10 parts.
Gum arabic 1 part.
Water 100 parts.
(B) Ferrous sulphate..... 1 part.
Gum arabic 2 parts.
Indigo carmine..... $\frac{1}{2}$ part.
Water 10 parts.

Apply solution A to the portion of the leather to be written on, and when dry write with solution B. The writing produced in this manner has a beautiful black color and penetrates deeply into the leather, especially if the lower side of it has been thoroughly moistened.

4763. Nut Gall Ink.

Powdered gall nuts..... 16 parts.
Gum arabic 8 parts.
Cloves in powder..... 1 part.
Sulphate of iron..... 10 parts.

Place in an earthen or glass vessel and add 100 parts of rain water, and let it stand for eight to fourteen days, with frequent agitations. At the expiration of the

time mentioned, decant for use. It is improved by the addition of from 2 to 6 parts of Campeachy wood. One great advantage of this ink is that it can be thinned with water at any time without injury, and that it can be converted into a copying ink by the addition of 4 parts of glucose.

4764. Ink, Extemporaneous Black.

Tannic acid	312 grains.
Powdered acacia	2½ drams.
Pyrogallic acid (Scher- ing's)	16 grains.
White sugar	1 dram.
Sulphate of iron (best). ..	2½ drams.
Distilled water	1 pint.
Creosote (Morson's from wood tar)	2 drops.

The quantity of acacia can be diminished if a freer flowing ink is desired.

The creosote should be shaken into the ink, not dissolved in alcohol, as is sometimes advised.

4765. Vanadium Ink.

Dissolve 10 parts of tannic acid in 100 parts of water, and 0.4 part of vanadate of ammonium in ten parts of water. Mix the two solutions and shake moderately. This ink flows with a deep black color from the pen, without spreading or striking through the paper, although it contains no gum. It has a pleasant gloss, cannot be copied, dries quickly, and even if the writing is laid in water for twenty-four hours, does not change its black color. It is very useful for writing addresses of letters, postal cards, etc., when used fresh. Dilute acids do not alter it, but solutions of chlorinated potassa (or soda) bleach it completely. After a few weeks the tint of the ink begins to change, writing executed with it becomes lighter and somewhat yellowish, and in about three months the change is completed, when it has a foxy yellow tint. The writing is still plainly legible, however, and cannot be removed either by water or acids.

4766. Blue-Black Writing Ink.

Tannic acid.....	200 grains.
Gallic acid.....	50 grains.
Protosulphate of iron.....	1 ounce.
Indigo carmine (neutral)..	320 grains.
Powdered cloves.....	5 grains.
Water	1 pint.

Dissolve the tannic and gallic acids in water. To this solution add the iron salt, and filter through cotton. Then add the indigo carmine, and lastly the cloves. One good copy can be obtained from this ink.

4767. Blue Writing Fluid.

Dissolve basic or soluble Prussian blue in pure water. This is the most permanent and beautiful ink known. It is not affected by the addition of alcohol, but is immediately precipitated by saline matter. The precipitate, however, still possesses the property of dissolving in pure water.

4768. Copying Ink, Black.

Nut galls.....	6 ounces.
Alum	½ ounce.
Brazil wood.....	½ ounce.
Sugar	½ ounce.
Sour beer.....	1 gallon.

Infuse this mixture for 24 hours in a glazed earthenware vessel, frequently stirring it; raise to boiling temperature, and boil down to two-thirds of its original volume. Strain and add 1½ ounces powdered sulphate of iron. Let it stand some days in the sun, and afterward bottle.

4769. Copying Ink, Black.

Boil 33 parts each of coarsely-powdered gall nuts, extract of logwood, and bruised tormentil root in 500 parts of water, and strain the fluid. Next dissolve 180 parts of sulphate of iron and 33 parts of alum in 250 parts of water; add this solution to the above fluid, and dissolve in it by boiling 1 dram of indigo carmine, 1 ounce of gum arabic and 2½ ounces of white sugar.

4770. Copying Ink, Black.

Rain water.....	2 gallons.
Gum arabic.....	¼ pound.
Brown sugar.....	¼ pound.
Clean copperas.....	¼ pound.
Powdered nut galls.....	¾ pound.

Bruise all and mix, shaking occasionally for 10 days, and strain. If needed sooner, let it steep in an iron kettle until the strength is obtained.

4771. Bean's French Copying Ink.

Consists of 1,650 parts by weight of beer, 95 of gall nuts, 30 of gum arabic, 40 of calcined sulphate of iron, 20 of tormentil root, 10 of lampblack, 10 of rock candy, 60 of white sugar, and 5 of honey.

4772. Violet Copying Ink.

Extract logwood, French, extra fine.....	100 parts.
Oxalate of ammonium.....	30 parts.
Sulphate of aluminum.....	30 parts.
Oxalic acid.....	8 parts.
Bichromate of potassium...	1 part.
Salicylic acid.....	1 part.
Pure water, q. s.	

Reduce the first four ingredients to a

coarse powder and heat the mixture with 800 parts of water to boiling in a copper vessel. Then add a solution of bichromate of potassium in 150 parts of hot water; next add the salicylic acid, and set the whole aside for 14 days. Pour off the clear liquid and put it in $\frac{1}{4}$ or 1-pound bottles. In thin layers this ink has a fine red tint and writes with a violet-red color, which copies dark violet, and also assumes the last-mentioned shade when drying. It is one of the best copying inks in existence. Writing done by it can be copied many weeks afterwards.

4773. Violet Copying Ink.

Methyl-violet $\frac{1}{2}$ ounce.
Water 16 ounces.
Glycerine $\frac{1}{2}$ ounce.

Dissolve the violet in the water and add the glycerine.

A few drops of creosote should be added to make the ink keep.

4774. Red Copying Ink.

Fuchsine $\frac{1}{2}$ ounce.
Water 30 ounces.
Glycerine $\frac{1}{2}$ ounce.

Dissolve the fuchsine in the water; then add the glycerine.

4775. Ink for Copying Without Pressure.

Extract logwood..... 1 ounce.
Sodium carbonate, crystals 2 drams.
Neutral potassium chromate..... 15 grains.
Gum acacia..... 2 drams.
Glycerine 1 ounce.
Distilled water, q. s.

Place the extract, in coarse powder, in a porcelain capsule with the sodium carbonate, add 8 fluid ounces distilled water and heat until the extract is all dissolved and the solution acquires a deep red color. Remove from the heat and add the glycerine, and then the chromate and the acacia, each previously separately dissolved in a little water.

4776. Document Ink.

Solution tersulphate of iron
(U. S. P.)..... 44 parts.
Sulphate of sodium (crystals)..... 20 parts.
Sugar 20 parts.
Ink body..... 500 parts.
Aniline blue (water-soluble) 4 parts.
Pure water, q. s.

Dissolve the sulphate of sodium in 242 parts of water, add the solution of tersulphate of iron and the sugar, and when the latter is dissolved, add the ink body. Lastly, add the aniline blue, dissolving in 200 parts of water. In place of the ink body,

a solution of 50 parts of tannic acid in 450 parts of water may be added. Let the ink stand eight days, then pour off the clear liquid. This ink writes with a fine blue.

4777. Green Ink.

Verdigris 2 ounces.
Cream tartar..... 1 ounce.
Water 8 ounces.

Boil to one-half, and filter.

4778. Green Ink.

Dissolve 180 grains bichromate of potassium in 1 fluid ounce of water; add, while warm, $\frac{1}{2}$ ounce spirit of wine, then decompose the mixture with concentrated sulphuric acid until it assumes a brown color; evaporate this liquor until its quantity is reduced to one-half; dilute it with 2 ounces distilled water; filter it, add $\frac{1}{2}$ ounce alcohol, followed by a few drops strong sulphuric acid; it is now allowed to rest, and after a time it assumes a beautiful green color. After the addition of a small quantity of gum arabic, it is ready for use.

4779. Red Ink.

Ammonia 1 dram.
Gum arabic..... 4 grains.
Carmine, No. 40..... 6 grains.
Carmine, No. 6 or 8..... 5 grains.
Soft water, to make..... 1 ounce.

4780. Red Ink.

Carmine, No. 40..... 30 grains.
Ammonia water..... 1 dram.
Acacia 6 grains.
Water, q. s..... 1 ounce.

Dissolve the carmine in the ammonia, and add the other ingredients.

The depth of tint may be varied by the use of more or less water.

4781. Red Ink.

Half a dram of powdered drop lake and 18 grains powdered gum arabic, dissolved in 3 ounces ammonia water, makes one of the finest red or carmine inks.

4782. Red Ink.

Brazil wood..... 2 ounces.
Muriate of tin..... $\frac{1}{2}$ dram.
Gum arabic..... 1 dram.
Water 32 ounces.

Boil down to one-half, and strain.

4783. Red Ink.

Dissolve 25 parts, by weight, of saffranin in 500 parts of warm glycerine, then stir in carefully 500 parts alcohol and an equal quantity of acetic acid. It is then diluted with 9,000 parts of water, in which is dissolved a little gum arabic.

4784. Red Ink.

Rub fine 6 parts of red carmine with 75 parts of liquid water glass. Dilute this mixture with 675 parts rain water. Let it stand a few days, and pour off the fluid.

4785. Ink Eraser.

Immerse blotting paper or any similar material in a hot concentrated solution of citric acid, roll it into a pencil, and coat the larger portion of it with paper or lacquer. Moisten the eraser with water, and rub over the ink to be removed. Drop upon the ink spot a drop of water containing chloride of lime. The ink immediately disappears.

4786. Ink Eraser.

Mix equal parts of oxalic acid and tartaric acid in powder. When to be used, dissolve a little in water. It is poisonous.

4787. Ink Eraser.

Dissolve equal parts of cream of tartar and citric acid in water.

4788. Ink Eraser.

Cold aqueous or acetic acid solution of calcium hypochlorite, bleaching powder, eau de Javelle.

4789. Ink Eraser.

Alum,
Amber,
Sulphur,
Saltpetre,

Of each, 1 part, in fine powder.

Mix. This forms an excellent mixture for the removal of ink spots and writing on paper.

4790. Ink Erasive.

In 2 quarts of water dissolve 4 ounces of citric acid, and then add from 6 to 8 ounces of a concentrated solution of borax. This is solution No. 1. To prepare solution No. 2, add 2 quarts of water to $\frac{3}{4}$ pound of chloride of lime, shake well and set aside for about a week; decant, and add from 6 to 8 ounces of concentrated solution of borax. This composition is used by saturating the ink spot with solution No. 1, removing excess of liquid with a blotter, and then applying solution No. 2. When the stain has disappeared, apply the blotter, and wash the spot by the alternate use of clear water and blotting paper.

4791. Ink for Writing on Glass.

By rubbing up equal parts of lampblack and iron scale (hammer scale) with strong gum mucilage an ink is obtained which can be used for writing on glass.

4792. Indelible Ink.

Aniline black 1 dram.
Strong hydrochloric acid.. 60 drops.
Alcohol 6 drams.
Dissolve, and add a hot solution of $1\frac{1}{2}$ drams gum arabic in 3 ounces of water.

4793. Indelible Ink.

Silver nitrate 125 parts.
Ammonia water 250 parts.
Soda (commercial) 175 parts.
Mucilage acacia 375 parts.
Boiling water 125 parts.
Dissolve the silver salt in the water of ammonia, and separately the soda in the boiling water and mix; add the mucilage and set in the sun until the mixture becomes brown.

4794. Indelible Ink.

Nitrate of silver 50 grains.
Tartaric acid 40 grains.
Carmine, No. 40..... 5 grains.
Solution ammonia $\frac{1}{2}$ ounce.
Mucilage of gum arabic.... $\frac{1}{2}$ ounce.
Dissolve the nitrate of silver in the ammonia, and add the tartaric acid; then rub the carmine with the solution. Lastly, add the mucilage. This ink is red when first written with; on the application of heat it soon changes into black.

4795. Indelible Ink.

Nitrate of silver..... 1 ounce.
Carbonate of sodium..... $1\frac{1}{2}$ ounces.
Tartaric acid 60 grains.
Aqua ammonia 6 ounces.
Refined sugar 6 drams.
Powdered gum arabic.... 10 drams.
Distilled water, a sufficient quantity.
Dissolve the nitrate and the carbonate separately in sufficient water, mix the solutions, collect and wash the precipitate and rub it while still moist with the acid until effervescence ceases. Then dissolve the precipitate and the sugar and gum in the ammonia, adding enough water to make 8 ounces.

4796. Indelible Ink.

Toluidine 10 parts.
Aniline oil 240 parts.
Dissolve and add:
Hydrochloric acid 480 parts.
Mucilage 480 parts.

4797. Indelible Ink.

Mix 50 grams aniline oil (containing more or less toluidine), 25 cubic centimeters water, 25 cubic centimeters hydrochloric acid, heat in a flask on a water bath, to complete solution. Then add 10 grams chloride of copper, and heat to boiling point. The mixture will gradually assume a violet color, and there should then be

added about 15 cubic centimeters of hydrochloric acid and 10 grams bichromate of potash, alternately, in small portions. If the effervescence becomes too violent, remove the heat. Finally, add 10 to 15 cubic centimeters hydrochloric acid to dissolve any coloring matter that may have separated. Filter the solution, and the ink is completed and ready for use.

4798. Indelible Ink.

Make a solution of 4 parts hydrochlorate of aniline and 10 parts gum arabic in 10 parts of glycerine and 40 parts of water. Make another solution of 15 parts of chloride of copper, 10 parts chloride of ammonium, 20 parts chlorate of sodium in 100 parts of water. To use, mix 5 parts of the first solution with one part of the second and apply to the unsized linen, and later expose to steam for some time.

4799. Red Indelible Ink.

Make three solutions thus:

(a.) Dissolve 3 drams of sodium carbonate and gum arabic in 12 drams of water.

(b.) Dissolve 1 dram platonic chloride in 2 ounces of water.

(c.) Dissolve 1 dram stannous chloride in 4 ounces distilled water.

Moisten the place to be written upon with solution (a) and dry with a warm iron. Then write with (b), and when dry moisten with solution (c).

4800. Red Indelible Ink.

Italian marking ink is made by dissolving 1 part of chloride of gold (or better, chloride of gold and sodium) in 10 parts of water, and when the solution is to be used a small portion of it is mixed with an equal quantity of mucilage. The fabric is to be previously treated with a solution of 1 part stannous chloride and 10 parts gum arabic in 100 parts water, dried and ironed. After writing with the ink, expose the fabric to gentle heat, and when the writing has become of a handsome red, wash the place repeatedly with water.

Always use clean pens, preferably of gold or quill.

4801. Indelible Ink for Stamps.

Sodium carbonate..... 22 parts.

Glycerine 85 parts.

Gum arabic in powder..... 20 parts.

Silver nitrate 11 parts.

Ammonia water 20 parts.

Venetian turpentine..... 10 parts.

Triturate the carbonate of sodium, gum arabic and glycerine together. In a separate flask dissolve the silver nitrate in the ammonia water, mix the solution with the triturate, and heat to boiling, when the

turpentine is to be added with constant stirring. After stamping, expose to the sunlight, or use a hot iron. The quantity of glycerine may be varied to suit circumstances.

4802. Marking Ink for Packages.

Take lampblack and mix thoroughly with sufficient turpentine to make it thin enough to flow from the brush. Powdered ultramarine, instead of lampblack, makes a fine blue marking mixture for the same purpose.

4803. Marking Ink for Packages.

An excellent and very cheap ink is made by mixing $\frac{1}{4}$ ounce of bichromate of potash and 4 ounces extract of logwood in a stone jar or demijohn with 2 gallons of hot water. Shake well and let it stand for about two weeks, shaking occasionally.

4804. Non-Freezable Ink.

Black aniline 4 grams.

Hydrochloric acid 5 grams.

Alcohol 4 fl. drams.

Glycerine 10 grams.

Water 2 fl. drams.

Make the aniline into a paste with the acid and add the alcohol to form a solution. Mix the glycerine and water and heat it before adding the first solution. If the ink is not kept in well-stoppered vials, the alcohol will evaporate.

4805. Pharmaceutical Ink.

Alizarin paste..... 15 grams.

Carbonate of soda..... 7 grams.

Extract of logwood..... 25 grams.

Water 1,000 grams.

Dissolve the carbonate in a little water, add the alizarin paste, and, lastly, the logwood, dissolved in the remainder of the water, and filter. Transfer the liquor to a rather large bottle, drop in a few nails or iron filings, and expose the whole to the sunlight for about a week, with occasional shaking. Decant and add 4 or 5 grams of carbolic acid to insure keeping.

4806. Yellow Ink.

Boil French berries, $\frac{1}{2}$ pound, and alum, 1 ounce, in rain water, 1 quart, for half an hour or longer, then strain and dissolve in the hot liquor gum arabic 1 ounce.

4807. Yellow Ink.

Gamboge, pulverized..... 1 ounce.

Hot water..... 5 ounces.

Dissolve, and when cold add:

Alcohol $\frac{1}{2}$ ounce.

4808. Ink for Writing on Photographs.

The following answers very well for numbering and marking proofs, the writing being executed on a dark portion:

Iodide of potassium..... 10 parts.
Water 30 parts.
Iodine 1 part.
Gum 1 part.

The lines should bleach under the strokes by the conversion of the silver into iodide.

4809. Red Ink.

Carmine, No. 40..... 30 grains.
Ammonia water..... 1 fl. dram.
Acacia 6 grains.
Water, sufficient to make. 1 fl. ounce.

Dissolve the carmine in the ammonia, and add the other ingredients.

4810. Red Ink.

Best ground Brazil wood, 4 ounces; diluted acetic acid, 1 pint; alum, $\frac{1}{2}$ ounce. Boil slowly 1 hour in covered enameled dish, strain, and add $\frac{1}{2}$ ounce gum.

4811. Red Ink.

Boil 4 ounces Pernambuco wood with 16 ounces dilute acetic acid and an equal quantity of water until 24 ounces remain; add 1 ounce alum and evaporate to 16 ounces; add 1 ounce gum arabic, strain, cool, and lastly add 1 dram protochloride of tin

4812. Red Ink.

An excellent red ink is obtained by grinding carmine with a solution of potassium silicate in a porcelain mortar. The ink, which should be preserved in a well-closed bottle provided with an oiled stopper, is said to dry very rapidly and leave a brilliant appearance.

4813. Red Ink.

Boil 2 ounces Brazil wood, $\frac{1}{2}$ ounce alum and $\frac{1}{2}$ ounce cream of tartar in 16 ounces rain water till reduced one-half. strain and dissolve in it $\frac{1}{2}$ ounce gum arabic, and add a tincture made with $1\frac{1}{2}$ drams cochineal in $1\frac{1}{2}$ ounces alcohol.

4814. Red Ink.

Triturate 1 dram cochineal and 1 dram carbonate potash with a little boiling water; add 1 dram burnt alum and 2 drams cream tartar, and water to bring to desired color.

4815. Red Ink.

Patent.—Take common soda, potash, or carbonate of ammonia, and add to it at intervals twice its weight of crude argols in powder; when effervescence has ceased, decant or filter; add to it next, by measure, half the quantity of oxalate of alumina,

prepared by adding to precipitated alumina in a damp state as much oxalic acid as will dissolve it. Into this mixture, when cold, put as much powdered cochineal as will give it a fine red color; let stand 48 hours, then strain for use.

4816. Red Ink.

A general formula for aniline inks is: Take 4 drams starch, 6 drams chromate of lead, 6 drams sal ammoniac, 6 drams any aniline salt, $1\frac{1}{2}$ drams chlorate soda, and water sufficient.

4817. Red Ink.

Dissolve 1 part soluble diamond fuchsin in 150 to 200 parts hot water.

If an addition of gum is required (seldom necessary), 1 part of dextrin may be added to 100 parts of ink but never gum arabic.

4818. School Ink.

Japanese nut galls..... 15 pounds.
Water 80 quarts.
Dextrin 6 pounds.
Ferrous sulphate..... 5 pounds.
Wood vinegar..... 1 pound.

Mix with logwood extract, 14 pounds; dextrin, 12; water, 100 quarts.

4819. Show Card Ink.

Pure asphaltum..... 16 ounces.
Venice turpentine..... 18 ounces.
Lampblack 4 ounces.
Spirit of turpentine..... 2 quarts.

Dissolve and mix thoroughly.

4820. To Write in Silver.

Finest pewter of block tin, $1\frac{1}{2}$ ounces; quicksilver, 3 ounces. Mix until both become fluid, grind with gum water, and write with it. The writing will appear as if done with silver.

4821. Stamp Inks.

These may be divided into three classes: First, those made with mineral colors and an oily basis; second, those containing aniline colors dissolved in oil; and third, aniline inks made with glycerine. The last are for india rubber stamps, the oily colors being unsuitable for these. The aniline colors employed for the oily inks are the insoluble ones put on the market by the firm of Franz Schaal, Dresden.

Oily Stamp Inks.

Blue:

Ultramarine 25 parts.
Olive oil..... 75 parts.

Reduce the ultramarine to an impalpable powder, and mix with the olive oil.

Blue:

Paris blue..... 10 parts.
Ultramarine 5 parts.
Olive oil..... 85 parts.

Mix the solids, and when reduced to an

impalpable powder, gradually add the olive oil, with constant stirring.

Green:

Verdigris 25 parts.
Oleic acid..... 5 parts.
Olive oil..... 70 parts.

Rub the verdigris to a very fine powder, mix the oleic acid with it, and after a few minutes the olive oil.

Red:

Vermilion 40 parts.
Olive oil..... 60 parts.

Prepare as above.

Black:

Gas black..... 15 parts.
Olive oil..... 85 parts.

Prepare as above.

All of these inks should be well shaken before pouring on the pad.

4822. Glycerine Stamp Inks.

Aniline water-blue, 1 B..... 3 parts.
Distilled water..... 10 parts.
Wood vinegar..... 10 parts.
Rectified spirit..... 10 parts.
Glycerine 70 parts.

Make a solution by rubbing in a mortar.

In the same way, and with the same compound basis, are prepared the following:

Violet:

Methyl-violet, 3 B..... 2 parts.

Red:

Diamond fuchsin I..... 2 parts.

Green:

Aniline green, D..... 4 parts.

Brown:

Vesuvium B..... 5 parts.

Black:

Deep black, E..... 3 parts.

For bright red, omit the vinegar from the solutions, replacing it by water, and using 3 parts of eosin BB N.

All the liquids in the formulas are to be taken by weight.

4823. Ink for Rubber Stamps.

Aniline (violet or crimson)... 1 part.
Water 4 parts.
Methylic alcohol..... 4 parts.
Dissolve, then add:
Treacle 1 part.
Glycerine 1 part.

4824. Stencil Inks.

Take of shellac, 2 ounces; borax, 2 ounces; water, 25 ounces; gum arabic, 2 ounces; and of Venetian red a sufficiency. Boil the borax, shellac and some water until they are dissolved; add the gum arabic and withdraw it from the fire. When the solution has become cold, complete to 25 ounces with water, and add more red to bring it to a suitable consistency.

4825. Stencil Inks.

An excellent stencil ink for boxes and packing cases can be made by mixing lamp-black, fine clay and gum arabic together. The lampblack gives the color, the clay furnishes a body, and the gum an adhesive. Water will answer as a solvent, but lampblack is so light that a few drops of vinegar or other acid will facilitate its admixture with the other ingredients. Any good adhesive substance, such as dextrin or gum tragacanth, may be found to answer as well as gum arabic to bind the mixture.

4826. Colored Stencil Ink.

Shellac 4 parts.
Borax 1 part.

Dissolve in a small quantity of boiling water and dilute with hot water to the consistency of a very thin syrup; to this add a sufficient quantity of logwood, or Brazil wood extract, or soluble coal tar reds, for red. For blue add to the lac solution soluble Prussian blue or blue carmine.

4827. Sympathetic Ink.

A weak solution of nitrate of copper gives an invisible writing, which becomes red through heat.

4828. Sympathetic Ink.

A very dilute solution of perchloride of copper gives invisible characters that become yellow through heat.

4829. Sympathetic Ink.

Solution of chloride or nitro-muriate of cobalt; turns green when heated, and disappears again on cooling. If the salt is pure, the marks turn blue.

4830. Sympathetic Ink.

Onion juice; will become yellow when exposed to the heat.

4831. Sympathetic Ink.

Solution of acetate of lead; turns brownish black when exposed to the fumes of sulphuretted hydrogen.

4832. Invisible Ink.

Oxide of cobalt..... ½ ounce.
Muriatic acid, sufficient to dissolve it.
Water 4 ounces.
Mucilage of gum acacia... 1 dram.

Characters written on paper with this solution are invisible, but on the application of heat they instantly appear in blue. On cooling they become invisible again.

4833. Ink for Travelers.

Saturate white blotting paper with a strong solution of one of the aniline dyes, black, navy blue, scarlet or violet; a little gum should be put in the solutions. While

still wet press three or four sheets together to form a pad; then dry. A small square cut off and put in a little water makes ink in a few minutes.

4834. Typewriter Ink.

Aniline black $\frac{1}{2}$ ounce.

Alcohol 15 ounces.

Concentrated glycerine 15 ounces.

Dissolve the aniline black in the alcohol, and add the glycerine.

4835. Typewriter Ink.

Many of the salts of the aniline series are soluble in castor oil; methyl-violet is especially so, and advantage can be taken of this fact to prepare typewriter ink of remarkable power, admitting of a large number of copies being taken from the same impression. The incorporation and solution of the aniline in the oil can be effected on the small scale by triturating the previously powdered pigment with the oil in a mortar, the operation being sometimes facilitated by the addition of a little alcohol. Various colored inks for stamping pads might be produced in the same way.

4836. White Ink.

Chinese white, rubbed up with gum arabic water. If for blue paper, use a solution of oxalic acid (poison), using a gold or quill pen. This last is an excellent method of writing white on blue, and gives a permanent, ineffaceable record.

4837. Ink for Writing Upon Zinc and Tin.

Chlorate of potassium..... 60 parts.

Sulphate of copper..... 120 parts.

Aniline blue (water soluble) 1 part.

Acetic acid 100 parts.

Pure water, quantity sufficient.

Dissolve the chlorate of potassium and sulphate of copper in 1,400 parts of water, and dissolve the aniline blue in 400 parts of water, and add to it the acetic acid. Then mix both solutions. Upon zinc this ink is applied directly by writing with a steel pen. If to be used on tin or tinned iron, first free it from grease by ether, then rub over with a solution of equal parts chloride of zinc and hydrochloric acid. Of course, to write with this ink upon any surface the latter must be thoroughly clean.

4838. To Restore Faded Writing.

A moderately concentrated aqueous solution of gallotannic acid restores faded manuscripts without the inconvenience of employing ammonium hydrosulphate. The acid is applied with a pencil, the excess

washed off with water, and the manuscript dried in a current of air at about 55 degrees to 60 degrees C. The writing comes out clear and black.

4839. Ink Extract.

Extract of logwood..... 5 parts.

Yellow chromate of potash.. 1 part.

Half an ounce of this extract is sufficient to make a quart of ink.

4840. Ink Extract.

	Plain.	Copying.
Tannin	1 oz.	9 drams.
Dried sulphate of iron	$3\frac{1}{2}$ drs.	4 drams.
Gum arabic	75 grs.	2 drams.
Sugar	40 grs.	75 grains.
Aniline, water-blue I. B.....	40 grs.	75 grains.

4841. Ink Extract.

Tannic acid 50 parts.

Tersulphate of iron, dry.... 20 parts.

Sulphate of sodium, dry.... 10 parts.

Sugar 20 parts. || Aniline, blue (water soluble) | 4 parts. |

Reduce to a coarse powder and keep it in a tin box. When using it, pour the contents of the box into an earthen jar, add one quart of pure hot water, and stir until dissolved. When cold the ink is transferred to bottles. This ink writes with a bluish color and turns black rapidly. The dry tersulphate is best prepared by evaporating 25 parts of liquor ferri tersulphatis, U. S. P., on a water bath, to a syrupy condition, then adding the dry sulphate of sodium, and transferring the mass in thin layers, upon plates of glass, which are to be placed in a drying closet, until the mass is dry, when it may be reduced to a powder.

4842. Ink Tablets.

Nut galls 2 ounces.

Sulphate of iron..... 5 drams.

Sulphate of copper..... 15 grains.

Alum 1 dram.

Sugar candy 90 grains.

Gum arabic $2\frac{1}{2}$ drams.

Cream of tartar..... 15 grains.

Make into a stiff paste with water. Mold and dry.

4843. Frick's Ink Powder.

Pulverized nut galls..... 42 parts.

Ferrous sulphate 30 parts.

Gum arabic 15 parts.

Alum 6 parts.

The nut galls and alum are finely powdered and mixed with the other ingredients, previously thoroughly dried and

pulverized. The powder is then packed in boxes.

A small quantity of this powder thrown into water yields, in a short time, a fairly good ink, which, however, forms a thick sediment from which it must be poured off. An ink powder completely soluble may be readily prepared by extracting the nut galls by themselves with water, evaporating the extract to dryness, and mixing the residue with the other ingredients.

4844. Copy Ink Powder.

Extract of logwood.....	50.0 grams.
Ammonium oxalate	20.0 grams.
Aluminum sulphate	40.0 grams.
Oxalic acid	3.0 grams.
Salicylic acid	2.0 grams.
Potassium chromate yellow	2.0 grams.

Reduce each to a coarse powder and mix them. The above is sufficient to make two pints of copying or four pints of writing ink by the addition of warm water.

4845. Writing Fluid Powder.

Nut galls, ground.....	100 grams.
Ferrous sulphate.....	25 grams.
Sodium chloride.....	25 grams.
Sugar	25 grams.
Potassium bisulphate.....	6 grams.
Benzoic acid.....	2 grams.
Indigo carmine.....	2 grams.

Reduce each to a coarse powder and mix them. The quantity is sufficient to make 2 pints of ink.

4846. Hectograph Mass.

Glycerine	12 parts.
Gelatin	2 parts.
Water	7½ parts.
Sugar	2 parts.

4847. Hectograph Mass.

Water	10 parts.
Dextrin	1½ parts.
Sugar	2 parts.
Gelatin	15 parts.
Glycerine	15 parts.
Zinc oxide.....	1½ parts.

(Of the last named, it takes 24½ ounces mass to an 8x12-inch surface.)

4848. Hectograph Mass.

Gelatin	10 parts.
Water	40 parts.
Glycerine	120 parts.
Barium sulphate.....	8 parts.

4849. Hectograph Mass.

Gelatin	12 parts.
Dextrin	10 parts.
Glycerine	100 parts.
Barium sulphate.....	8 parts.

4850. Hectograph Mass.

Gelatin	10 parts.
Water	37½ parts.
Glycerine	37½ parts.
Kaolin	5 parts.

4851. Hectograph Mass.

Gelatin	10 parts.
Glycerine	15 parts.
Powdered talc.....	2 parts.

4852. Green Hectograph Ink.

Aniline blue, soluble in water, by weight.....	10 parts.
Picric acid.....	10 parts.
Alcohol (90 per cent).....	30 parts.
Glycerine	10 parts.
Water	30 parts.

By decreasing or increasing the quantity of picric acid, various shades of yellow are obtained.

4853. Red Hectograph Ink.

Diamond fuchsine, by weight.....	10 parts.
Alcohol	10 parts.
Acetic acid.....	2½ parts.
Gum arabic.....	10 parts.
Water	70 parts.

4854. Red Hectograph Ink.

Diamond fuchsine, by weight	10 parts.
Alcohol	10 parts.
Glycerine	10 parts.
Water	50 parts.

4855. Hectograph Ink.

Paris violet.....	1 part.
Water	3 parts.

4856. Hectograph Ink.

Rosaniline acetate.....	2 parts.
Alcohol	1 part.
Water	10 parts.

4857. Villon's Hectograph Ink.

Bordeaux red.....	3 parts.
Alcohol	2 parts.
Water	20 parts.
Glycerine	1 part.

4858. Willson's Hectograph Ink.

Rhodamin	3 parts.
Alcohol	4 parts.
Water	20 parts.
Glycerine	1 part.

4859. Drawing Crayons.

Spermaceti, 3 ounces; boiling water, 1 pint; agitate together till they form a species of emulsion; add bone ash, 1 pound (or more, previously reduced to an impalpable powder), and coloring matter q. s. to give the proper tint; reduce the whole to a perfectly homogeneous paste, and form it into crayons.

4860. Drawing Crayons.

Pipe clay and the finest prepared chalk, equal parts; or, pipe clay alone, q. s.; coloring, a sufficient quantity; make them into a paste with pale, mild ale.

4861. Drawing Crayons.

White curd or castile soap, cut into thin shavings, 1 ounce; boiling water, 1 pint; dissolve, and when cold add gradually as much rectified spirit of wine as will render the liquid barely transparent. With this fluid make equal parts of the finest elutriated clay and chalk into a stiff paste, adding coloring matter q. s. as before. For common qualities, the spirit of wine may be omitted, but the mass will then dry more slowly.

4862. Drawing Crayons.

Curd soap, $1\frac{1}{2}$ ounces; gum arabic, $\frac{1}{2}$ ounce; boiling water, $1\frac{1}{4}$ pints; dissolve, and use it as the last.

4863. Drawing Crayons.

Shellac, 3 parts; spirit of wine, 4 parts; oil of turpentine, 2 parts; dissolve and add pure clay, 6 parts; coloring matter, q. s.; form the mass into crayon, and dry them by a stove heat.

4864. Drawing Crayons.

Pale shellac, 5 parts; wood naphtha, 12 parts; dissolve, and with this fluid mix up the coloring powder, previously stirred up with an equal weight of fine pale blue clay; dry by a stove heat, as before.

4865. Lithographic Crayons.

Tallow soap, 7 parts; white wax, 6 parts; melt by a gentle heat, and add lampblack, 1 part; keep it melted, with constant stirring, for 20 or 30 minutes, then let cool a little, and cast it into molds.

4866. Lithographic Crayons.

White wax, 4 parts; shellac and hard tallow soap, of each 2 parts; lampblack, 1 part; as last.

4867. Lithographic Crayons.

Spermaceti, white wax and hard tallow soap, of each equal parts; lampblack, q. s. to color.

4868. Pencils for Writing on Glass.

Melt in a saucer:

Spermaceti 4 parts.

Tallow 3 parts.

Wax 2 parts.

Add to this, with constant stirring:

Red lead..... 6 parts.

Potash 1 part.

Continue to heat the mass for half an hour and then pour into small glass tubes, the size of a lead pencil.

MISCELLANEOUS.**4869. Cigar Flavoring.**

(a) Orris root 4 ounces.
Valerian root 4 ounces.
Tonka 4 ounces.
Vanilla 2 drams.
Jamaica rum 8 pints.

(b) Extract licorice 1 dram.
Extract vanilla $\frac{1}{4}$ dram.
Extract tonka 5 drops.
Tincture benzoin 3 drops.
Balsam Peru 3 drops.
Simple syrup 10 drops.
Flour 5 grains.
Caramel enough to color.

(c) Extract licorice 1 dram.
Extract vanilla $\frac{1}{4}$ dram.
Extract tonka 5 drops.
Flour 5 grains.
Dextrin 5 grains.
Acacia 5 grains.

(d) The best coloring for darkening light wrappers is probably a concentrated infusion, almost a fluid extract, made from the stems and cuttings of dark tobacco. The same obtained from fine Havana tobacco's employed for flavoring "filers." This process may be called a natural flavoring. For artificially reaching the same end, the following is recommended:

Fluid extract valerian..... 1 ounce.
Tincture of tonka beans... 8 ounces.
Alcohol, to complete..... 16 ounces.

(e) Tincture valerian 4 drams.
Butyric ether 4 drams.
Tincture vanilla 2 drams.
Spirits nitrous ether..... 1 dram.
Alcohol 5 ounces.
Water, to complete..... 1 pint.

(f) Valerianic acid 3 drams.
Acetic ether 40 minims.
Butyric ether 10 minims.
Alcohol 4 pints.

4870. Tobacco Flavors.

Home-made tobacco flavors do not, as a rule, give very satisfactory results. The flavors manufactured after secret and proprietary formulas represent much labor and experimenting before the proper combination was effected. Nearly all these formulas contain valerian in some form.

(a) Cascarilla bark 1 ounce.
Fluid extract valerian..... 1 ounce.
Tonka bean 2 drams.
Englsh rum 3 ounces.

Macerate three or four days, and it is then ready for use.

(b) Some tobaccos are very strong, and to extract some of the dark color and

rank flavor are soaked over night in salt water, dried, and flavored with a preparation consisting of:

Tincture of cascarilla.....	6 ounces.
Tincture of tonka.....	4 ounces.
Tincture of tolu.....	2 ounces.
Tincture of orris.....	2 ounces.
Tincture of valerian.....	2 ounces.
Oil nutmegs	$\frac{1}{2}$ ounce.
Oil cloves	$\frac{1}{4}$ ounce.
Oil rhodium	1 dram.

A number of flavors sold called Yara, Havana or Spanish are generally made by procuring tobacco of fine quality and making from it a strong fluid extract or tincture with diluted alcohol, and perfuming it with certain volatile oils and essences.

4871. Chewing Gum.

- (a) Balsam tolu 4 parts.
 Resin (white) 10 parts.
 Paraffin 3 parts.
 Powdered sugar, a sufficiency.

Melt the gums and paraffin together, strain, and, while still fluid, incorporate the sugar. Roll out with powdered sugar and cut into sticks.

- (b) Prepared balsam of tolu... 3 ounces.
 White sugar 1 ounce.
 Oatmeal 3 ounces.

Soften the gum on a warm bath and mix the ingredients; then roll into finely powdered sugar or flour to form sticks to suit.

- (c) Balsam of tolu..... 4 ounces.
 Gum benzoin 1 ounce.
 White wax 1 ounce.
 Paraffin 1 ounce.
 White sugar 1 ounce.

Make into a mass while warm and allow to cool, and cut into blocks.

- (d) Gum chicle $3\frac{1}{2}$ pounds.
 Paraffin wax 1 pound.
 Balsam tolu 2 ounces.
 Balsam Peru 1 ounce.

Dissolve the gum in as much water as it will take up, melt the paraffin and mix all together. Now take

Sugar, finely granulated	10 pounds.
Glucose	4 pounds.
Water	3 pints.

Put the sugar and glucose into the water, dissolve and boil them up to "crack" degree (so termed by confectioners), and pour the syrup upon an oil slab, and turn into it sufficient of the above mixture to make it tough and plastic, adding any one of the following flavors, if desired: Cinnamon, chocolate, sandalwood, myrrh, galangal, ginger or cardamoms. Mix thoroughly, and when sufficiently cool, roll into plates or sticks.

4872. Soap Bubbles.

One gram dry Marsellies soap is dissolved in 100 grams warm water; this is filtered, and to every 100 cubic centimeters of the solution 400 grams white sugar are added. Bubbles made with this liquid will last for several hours.

4873. Soap Bubbles.

Castile soap, shavings.....	$1\frac{1}{2}$ parts.
Glycerine	15 parts.
Water	20 parts.

The bubbles will sometimes last several hours if properly protected.

4874. Bubbles, Collodion Film Mixture.

Ether (by weight)	89 parts.
Absolute alcohol	$5\frac{1}{2}$ parts.
Photographic gun cotton...	$5\frac{1}{2}$ parts.

Dissolve and decant. To 100 parts of clear solution add 70 to 100 parts pure castor oil.

4875. For Silvering Glass.

1. Reducing solution: In 12 ounces of water dissolve 12 grains Rochelle salts, and boil. Add, while boiling, 16 grains nitrate of silver dissolved in 1 ounce of water, and continue the boiling for 10 minutes more, then add water to make 12 ounces.

2. Silvering solution: Dissolve 1 ounce nitrate of silver in 10 ounces water; then add liquor ammonia until the brown precipitate is nearly but not quite all dissolved; then add 1 ounce alcohol and sufficient water to make 12 ounces.

To silver: Take equal parts of numbers 1 and 2, mix thoroughly, and lay the glass face down, on the top of the mixture while wet, after it has been carefully cleaned with soda and well rinsed with clean water.

Distilled water should be used for making the solutions. About 2 drams of each will silver a plate 2 inches square. The dish in which the silvering is done should be only a little larger than the plate. The solution should stand and settle for two or three days before being used, and will keep good for a long time.

4876. Silvering Glass.

Dissolve 10 parts of silver nitrate in 30 parts of water, add 10 parts of spirit of ammonia and 20 parts of alcohol, and after three hours filter. Add to the filtrate a solution of $2\frac{1}{2}$ parts of grape sugar in 25 parts of water. To silver the inside of a flask, introduce a little of the solution, immerse the flask in water heated to 155 degrees F., shaking the flask so as to spread the solution well over its surface.

4877. Silvering Mirrors.

First prepare the following five solutions: (1) Silver nitrate, 60 grains in 10 drams distilled water; (2) ammonium nitrate, 146 grains in sufficient distilled water to measure 600 minims; (3) solution of caustic soda, specific gravity 1.050; (4) white rock candy, 5 drams, tartaric acid, 20 grains, distilled water, 5 drams, dissolve, boil constantly for one hour, then bring to the measure of 50 drams; (5) cupric tartrate, 42 grains, distilled water, 4 drams, mix and add solution of caustic soda, drop by drop, until a clear solution is effected, then bring to measure of 8 ounces. Now make solution No. 1 by mixing together 50 volumes of solution (2), 70 volumes of solution (1), and 375 volumes of solution (3); solution No. II. by mixing 1 volume of solution (4), 1 volume of solution (5), and 8 volumes of water.

The silvering liquid is made by combining immediately before using, 50 volumes of solution No. I. and 10 volumes of solution No. II. and 250 or 300 volumes of distilled water; pour over the polished glass surface and allow to stand a quarter or half an hour, when the silvering will be completed. Wash, dry and varnish.

4878. To Remove Fixed Bottle Stoppers.

Occasionally it is simply impossible, especially when the glass stopper has become fixed by means of the corrosive action of alkali or other substance capable of practically forming the stopper and neck of the bottle into one piece. Under such circumstances it is best to carefully break off the entire neck by a carefully directed blow with a wooden mallet or stick. In case of bromine bottles it is essential to guard against spilling the contents on the hands or clothing, which, in addition to the loss, causes severe injuries. As a rule, a stopper that can be removed at all will yield to continued and careful manipulations with the hands, especially if it is hit with a piece of wood, first on one side and then the other, to start it. The use of heat should be a last resort, and always carefully applied, and draughts of air avoided. Heat from friction or a match, or hot water can be used.

4879. Butter Color (Mrs. Smith's).

Annatto seed, bruised.... 1 ounce av.
Turmeric 2 drams.
Ammonium carbonate.... 40 grains.
Cottonseed oil..... 7 ounces av.
Lard oil..... 1 ounce av.

Boil, stirring frequently, until the proper rich color has been attained; then strain and allow to settle. Only the best material must be used.

4880. Butter Color.

Annatto, of good quality.. 10 parts.
Caustic potassa..... 1½ parts.
Borax 1 part.
Water 100 parts.
Tincture of turmeric..... 20 parts.
Mix and filter.

4881. Butter Color (Rorick's).

The materials for 1,000 pounds butter are: Lard, butter or olive oil, 6 pounds; annatto, 6 ounces; turmeric, 1 ounce; salt, 10 ounces; nitre, 2-5 ounce; bromochloralum, 3½ ounces; water, q. s. The lard, butter or oil is heated on a water-bath; the annatto and turmeric are then stirred into a thin paste with water and gradually added to the fatty matter, kept at a temperature of about 110 degrees F. The salt and nitre are then stirred in and the mixture heated to boiling, and continue the heat a number of hours until the mass becomes dark enough. The bromochloralum is then added, the mass stirred until cool, and then put in sealed cans.

4882. Butter Color (Bogart's).

Annattoine, 5 ounces; turmeric (pulverized), 6 ounces; saffron, 1 ounce; lard oil, 1 pint; butter, 5 pounds. Melt the butter over a water bath and strain through linen cloth. The saffron is made into ½ pint tincture, and, together with the turmeric and annattoine, is gradually stirred into the hot butter and oil, and boiled and stirred for about 15 minutes, then strain and stir till cool.

4883. Baking Powder.

(a.)
Cream of tartar..... 1 2
8 ozs. 6 ozs.
Baking soda..... 4 ozs. 3 ozs.
Corn starch..... 4 ozs. 1 oz.

A variation of the above is:

(b.)
Cream of tartar..... 3 pounds.
Bicarbonate of sodium..... 1 lb. 6½ ozs.
Best roller flour..... 1 pound.
Cornstarch ½ pound.

(c.)
Potassium bitartrate (pure). 19 parts.
Tartaric acid..... 8 parts.
Ammonia carbonate (bicarbonate)..... 1 part.
Soda bicarbonate..... 17 parts.
Starch 7 parts.

4884. Baking Powder, Alum.

Tartaric acid..... 4 parts.
Alum 8 parts.
Bicarbonate of sodium..... 12 parts.
Potato or cornstarch..... 16 parts.
Ammonium carbonate..... 3 parts.
Pulverize separately and sift; dry thoroughly with a low degree of heat. Mix in

a dry room, and at once pack into forms, taking care to pack hard. Cover at once with tin foil or paraffin paper, to preserve as far as possible from the effects of moisture. Cornstarch farina may be used in place of potato starch.

4885. Baking Powder, Ammonia.

Ammonium carbonate,
crystalline 6 ounces.
Tartaric acid $\frac{1}{2}$ pound.
Alum 1 pound.
Sodium bicarbonate $1\frac{1}{2}$ pounds.
Starch (or flour or potato
farina)..... 2 pounds.

The ingredients must be pulverized and sifted separately, dried at a very low temperature, mixed in a perfectly dry room, and immediately packed with great pressure into receptacles and sealed air-tight, to prevent as nearly as possible loss of ammonia.

4886. Removing Tattoo Marks.

The skin to be decolorized is first washed with a concentrated solution of tannic acid, and then closely punctured with a set of needles, such as tattooers use. A crayon of nitrate of silver is next thoroughly rubbed over the area, and after a moment the skin is dried off, when it will be found that the punctures are deeply blackened by the formation of tannate of silver in the superficial layers of the skin. The cauterization is said to result in an inflammatory reaction for a couple of days, and subsequently in the formation of a crust of thin eschar, which separates spontaneously in from fourteen to eighteen days, leaving beneath it a superficial red cicatrix, which gradually loses its color, and at the end of a few months is scarcely perceptible. It is not expedient to attack at one sitting an area larger than a five franc piece, lest the inflammation provoked should be too severe, and interfere with the pursuance of the daily duties of the individual. The only dressing after the little operation consists in keeping the part covered with tannin.

4887. To Set Plaster of Paris Quickly.

Add a small proportion of sulphate of potassium. This makes it very firm. Slaked lime is the material employed to make it set slowly. The proportion of either of these ingredients depends on the time required.

4888. To Make Plaster Set Slower.

Mix it with 2 or 4 per cent of powdered althaea root before adding the water. This not only retards the hardening of the plaster, but also enables it to be cut, filed, sawed and turned. An addition of 8 per

cent of althaea powder retards the complete setting of the plaster for about one hour, so that the mass can be used for any purpose where it is to remain plastic during at least a portion of that time.

4889. To Make Plaster Set Hard.

Mix best plaster of paris with 60 per cent (more or less, according to effect ascertained by preliminary experiment) of a very finely powdered marble (calcium carbonate), or add to it about 6 per cent powdered alum, or about the same amount of ammonium chloride before mixing with water.

4890. Freezing Mixtures.

(a) Sulphate of sodium..... 4 pounds.
Chloride of ammonium.. $2\frac{1}{2}$ pounds.

(b) Nitrate of potassium.... $2\frac{1}{2}$ pounds.

Mix them and when desired for use add 9 pounds of water.

(c) Nitrate of potash..... 2 pounds.

Chloride of ammonium.... 2 pounds.

Water 5 pounds.

(d) Nitrate of ammonia..... 4 pounds.

Water 4 pounds.

(e) Sulphate of sodium..... 5 pounds.

Diluted sulphuric acid.... 4 pounds.

(f) Phosphate of sodium..... 9 pounds.

Dilute nitric acid 4 pounds.

4891. Etching Fluid, to Write on Glass.

Ammonium fluoride 10 parts.

Barium sulphate 10 parts.

Rub well together in a porcelain mortar, transfer to a platinum or leaden capsule, and add enough fuming hydrofluoric acid to make a fluid suitable for writing, mix with a platinum spatula. The fluid must be used with a new steel pen, after thirty seconds it may be washed off, and the glass will be found to be sufficiently etched.

4892. Sea Water for Aquaria.

The following is the formula used in preparing the water for the great marine aquaria at the Paris exposition:

Sodium chloride 81 parts.

Magnesium sulphate 7 parts.

Magnesium chloride 10 parts.

Potassium chloride 2 parts.

Water 3,500 parts.

Mix and dissolve.

4893. Artificial Sea Salt.

Parts. Parts.

Sodium chloride..... 800 500

Magnesium chloride..... 110 100

Calcium chloride..... 20 10

Magnesium sulphate..... 65 30

Potassium iodide..... 2 1

Potassium bromide..... 3 1

Neither of these actually represents sea

salt in containing all the saline ingredients or exact quantities.

4894. Boiler Incrustations.

- (a) Catechu 100 parts.
 Potash 50 parts.
 Soda 50 parts.
 Common resin 10 parts.
 Lime 20 parts.
 Water 200 parts.

The lime, resin, soda and water are boiled for 30 minutes and then allowed to settle. A decoction of catechu in 100 parts of water is prepared in another boiler, strained and mixed with the other solution. The fluid is then stored for future use. Every six weeks one pint of the liquor for each horse power is introduced into the boiler by means of a feed-pump.

(b) For boilers of 30-horse power, fed with river water, the following mixture is used, which should be renewed every time the boiler is emptied.

- Crystallized soda 6 pounds.
 Dextrin 6 pounds.
 Alum 2 pounds.
 Sugar 2 pounds.
 Potash 1 pound.

4895. Pharaoh's Serpent's Eggs—Non-Poisonous.

- Potassium bichromate..... 2 parts.
 Potassium nitrate..... 1 part.
 White sugar 2 parts.

Pulverize the ingredients separately, mix well, and press into little paper cylinders. Keep in a dry place and protected from light.

4896. To Crystallize Grass.

Blue.

- Blue vitriol..... 1 pound.
 Boiling water..... 1 pint.

Orange.

- Potassium bichromate..... 1 pound.
 Boiling water..... 1 pint.

White.

- Alum 1 pound.
 Boiling water..... 1 pint.

Make separate baths and let the water cool slowly for forming small crystals. Larger ones are formed by hastening the cooling. It usually takes about 24 hours.

4897. Metallic Vegetation.

(a.) Lead tree; Arbor Saturni.

- Sugar of lead..... 1 ounce.
 Distilled water..... 1½ pints.
 Acetic acid, a few drops.

Dissolve, place the liquid in a clear white glass bottle, and suspend a piece of

zinc in the solution by means of a thread.

(b.) Silver tree; Arbor Dianae.

- Nitrate of silver..... 20 grains.
 Water 1 fl. ounce.

Dissolve, and add:

- Pure mercury..... ½ dram.

(c.) Tin tree; Arbor Jovis.

- Chloride of tin..... 3 drams.
 Nitric acid..... 10 to 15 drops.
 Distilled or rain water 1 pint.

Dissolve in a white glass bottle, and hang in it by a thread, a small rod of zinc.

In these experiments the metals are precipitated in a very beautiful arborescent form. It is curious to observe the laminae shoot out, as it were, from nothing, assuming forms resembling real vegetation.

4898. Chemical Gardens.

Are made in various ways, and their beauty depends much on the care which is exercised in their preparation. They are simply crystals which assume pretty forms. A very attractive chemical garden is made by taking a wide-mouth bottle, or, better still, a candy jar, and fill it to the depth of an inch or two with clean sand—white sand is preferable. Then place on the sand a few crystals of sulphate of copper, sulphate of iron and sulphate of aluminum. These crystals should be partially covered with sand. Then mix 1 part of water with 3 parts of silicate of sodium, and pour a sufficient quantity of the solution over the crystals to cover them to the depth of an inch or two. Let the jar stand perfectly quiet for a week, or until the silicate has united with the metals, which it will do and form beautiful crystals. Then syphon off the liquid and replace it with clear, soft water. Such a garden, if kept quiet and free from dust, will last for a long time.

4899. Chemical Barometer.

- Nitrate of potassium..... ½ dram.
 Chloride of ammonium..... ½ dram.
 Camphor 2 drams.
 Rectified spirit..... 2 ounces.

Put the mixture into a bottle 10 inches in length and ¾ inch in diameter, and cover the mouth with a piece of perforated bladder. If the weather promises to be fine, the insoluble matter will settle at the bottom of the tube, while the liquid remains pellucid; but previous to a change for rain the compound will gradually rise, the fluid remaining transparent. Twenty-four hours before a storm or very high wind, the substance will be partly on the surface of the liquid, apparently in the form of a leaf; the fluid in such cases will be very turbid, and in a state resembling fermentation.

4900. Window Pane Barometer.

By painting the window pane or wall paper with any one of the following solutions, different colors are exhibited upon atmospheric changes, owing to the well-known properties of nickel and cobalt salts, which color in accordance with the variation or amount of moisture in the air:

No. 1—Chloride of cobalt, 1 part; gelatin, 1 part; water, 100 parts.

No. 2—Chloride of copper, 1 part; gelatin, 10 parts; water, 100 parts.

No. 3—Chloride of cobalt, 1 part; gelatin, 20 parts; water, 200 parts; nickel oxide, .75 part; chloride copper, .25 part.

In damp weather, all will be colorless; in clear weather No. 1 will be blue, No. 2 yellow, and No. 3 green.

4901. Crystal Ornaments.

Alum,
Sulphate magnesium,
Sulphate zinc,
Sulphate copper,
Sulphate iron,
Sulphate sodium,
Sulphate potassium,

Of each..... 1 ounce.

Crush the salts, mix them together and dissolve them in as little boiling water as possible (about a pint). Stand the mixture in a warm place, where it cannot be affected by dust and where it will not be agitated. After due evaporation has taken place the whole will begin to shoot into crystals. The color and peculiar form will distinguish each crystal, and the whole will together form a beautiful and pleasing object, which, when intended for preservation, should be placed under a glass shade.

4902. Incombustible Wick.

Fine wood sawdust..... 4 parts.
Powdered fire clay..... 2 parts.
Powdered glass..... 1 part.
Cotton or cotton dust..... 1 part.
Sea sand..... 6 parts.

This mixture, moistened, dried and fired at a full red heat for half an hour, is stated to yield a very permanent and porous material for lamp wicks.

4903. Stamping Powders.

Ultramarine, to which has been added a small proportion of powdered resin, is generally used for stamping embroidery patterns on white goods. The powder is dusted through the perforated pattern, which is then covered with a paper and a hot iron passed over it to melt the resin and cause the powder to adhere to the cloth. The following are said to be excellent powders:

(a.) White—One part each of resin, copal,

dammar, mastic, sandarac, borax, and bronze powder, and 2 parts white lead.

(b.) Black—Equal parts resin, dammar, copal, sandarac, Prussian blue, ivory black, and bronze powder.

(c.) Blue—Equal parts of resin, dammar, copal, sandarac, Prussian blue, ultramarine and bronze powder.

In all these powders the gums are first to be thoroughly triturated and mixed by passing through a sieve, and the other ingredients carefully added. Other colors may be made by using chrome yellow, burnt or raw sienna, raw or burnt umber, vandyke brown, etc. For stamping fabrics liable to be injured by heat, the stamping is done by moistening a suitable powder with alcohol and using it like a stencil ink. White lead gives good results in this way.

4904. Transfer Paper.

Well rub the surface of thin post or tissue paper with black lead, vermilion, red chalk or any coloring matter. Wipe well off with a clean rag and it is then ready for use.

4905. Tracing Paper.

It is stated that the Austrian hydrographic bureau adopts the following method of making paper transparent for copying drawings: The sheet of paper being placed over the drawing to be copied, it is lightly rubbed with a ball of cotton saturated with pure benzin. The tracing can then be readily made, owing to the resulting transparency, and the benzin, on evaporating, leaves the paper opaque as before, and without any trace of odor. Absolute purity of the benzin, however, must be insisted upon to secure good results.

4906. Carbon Tracing Paper.

Lard..... 6 parts.
Yellow wax..... 1 part.
Lampblack..... 1 part.

The melted fats are gradually poured into the warm mortar containing the lampblack, triturating well all the time. While still fluid apply with a brush to the paper, and wipe off any excess.

4907. Wiggins' Rules for Doses.

1st. The dose of all infusions is 1 to 2 ounces, except digitalis, which is 2 to 4 drams.

2nd. All poisonous tinctures, 5 to 20 minims, except tincture of aconite, which is 1 to 5 minims.

3rd. All wines, from $\frac{1}{2}$ to 1 fluid dram, except wine of opium, which is 5 to 15 minims.

4th. All poisonous solid extracts can be given in $\frac{1}{2}$ -grain doses, except extract of calabar bean, which is 1-16 to $\frac{1}{4}$ grain.

5th. All diluted acids from 5 to 20 minims, except hydrocyanic acid, which is 2 to 8 minims.

6th. All waters from 1 to 2 ounces, except cherrylaurel water and water of ammonia, which are 10 to 30 minims.

7th. All medicated syrups, 1 dram.

8th. All mixtures from $\frac{1}{2}$ to 1 fluid ounce.

9th. All spirits from $\frac{1}{2}$ to 1 fluid dram.

10th. All essential oils, 1 to 5 minims.

4908. Purifying Alcohol and Alcoholic Liquids in General.

Alcoholic liquids are freed from impurities by treatment with a basic tartrate, followed by a hyposulphite (thiosulphate). Tartrate of potassium or sodium, or, preferably, the double salt known as Rochelle salt, may be used. Among the hyposulphites, those of barium and sodium have given excellent results. The alcoholic liquid, contained in a suitable closed vessel, is mixed with small quantities of the tartrate, being well agitated after each addition, until it reacts neutral or faintly alkaline to test paper. The impurities are now allowed to settle, which requires from a few hours to several days, according to circumstances; but in any case the operation is considerably hastened by the application of heat or by the action of light. Hyposulphite is now added in quantity equal to about one-third of the tartrate used. The liquid is well stirred and allowed to settle, when the clear portion may be drawn off and rectified in the usual way. This process is applicable to all kinds of alcoholic liquids, notably wines and rum, the flavor of which is greatly improved.

4909. To Detect Alcohol in Oils.

Take a slim glass tube 8 or 10 inches in length, closed at one end, and as large as the finger. Put in an ounce or two of oil, paste a piece of paper on the outside of the glass, so that its lower edge will be even with the top of the oil. Then add two or three times as much soft water, and shake well for a few moments. When it has settled, in an hour or so, the water will have absorbed the alcohol from the oil, which will show proportionately below the line first fixed.

4910. Deodorizing Bisulphide of Carbon.

Bisulphide of carbon may be deprived of its unpleasant odor by adding to 1 litre of the same $\frac{1}{2}$ cubic centimeter bromine. The mixture is set aside for 3 or 4 hours, and the bromine removed by shaking with a slight excess of caustic potash or with copper turnings. If the liquid has become turbid during the process it may be cleared

by shaking with a small quantity of calcium chloride and filtering. Bisulphide of carbon may also be treated with small quantities of peroxide of lead, decanting the liquid from the precipitate, and rectifying. In both cases the result is a colorless liquid, of agreeable odor, and not in the least altered chemically.

4911. To Deodorize Benzin.

The disagreeable odor of benzin can be removed by shaking repeatedly with plumbate of soda, made by dissolving oxide of lead in caustic soda and rectifying. Simply shaking with charcoal and filtering will partially remove the odor.

4912. Purification of Benzin.

Potassium permanganate... 1 ounce.

Sulphuric acid..... $\frac{1}{2}$ pint.

Water..... $3\frac{1}{2}$ pints.

Mix the acid and water, and when the mixture has become cold, pour it into a 2-gallon bottle. Add the permanganate and agitate it until it is dissolved. Then add:

Benzin..... 1 gallon.

And thoroughly agitate. Allow the liquids to remain in contact for 24 hours, frequently agitating the mixture. Separate the benzin, and wash in a similar bottle with a mixture of

Potassium permanganate... $\frac{1}{4}$ ounce.

Soda..... $\frac{1}{2}$ ounce.

Water..... 2 pints.

Agitate the mixture frequently during several hours. Then separate the benzin and wash it thoroughly with water.

4913. Paper or Pasteboard, Waterproof.

Mix 4 parts of slaked lime with 3 parts of skim milk, and add a little alum; then give the material two successive coatings of a mixture with a brush, and let it dry.

4914. Impermeable Wrapping Paper.

Dissolve $1\frac{1}{2}$ pounds of white soap in a quart of water; then dissolve 2 ounces of gum arabic and 6 ounces of glue in another quart of water. Mix the two solutions; warm the mixture; dip the paper in the liquid. Pass it between two rolls (a clothes wringer, for example), and allow to dry. In default of rolls, let the paper drip well, or, better, pass it between two sheets of dry paper. Then let it dry in a mild temperature.

4915. Luminous Paper.

Dry thoroughly and mix by grinding 3 parts gelatin, 3 parts potassium bichromate and $37\frac{1}{2}$ parts calcium sulphide. Stir 1 part of the powder with $1\frac{1}{2}$ parts boiling water to a thickly fluid paint. Apply one or two coats with a brush to the paper or pasteboard to be made luminous.

4916. To Drill Holes in Glass.

Stick a piece of stiff clay or putty on the part where you wish to make the hole. Make a hole in the putty the size you want the hole, reaching to the glass, of course. Into this hole pour a little molten lead, when, unless it is very thick glass, the piece will drop out.

4917. Razor Paste.

Emery, in finest powder..... 2 parts.

Jewelers' rouge..... 2 parts.

Spermaceti ointment..... 2 parts.

Mix well together, and rub into the strop before using.

4918. Razor Paste.

Coke is ground to an impalpable powder and well mixed with some suitable medium, such as prepared lard, to a stiff paste. Coke constitutes the true "diamond paste" for sharpening razors and is the only secret which some of the manufacturers pretend to preserve inviolate. A few drops of the oil of lavender are sometimes added to the above mixture.

4919. Razor Paste.

Mix fine emery intimately with fat and wax until the proper consistency is obtained in the paste, and then rub it well into the leather strop. Prepare the emery by pounding thoroughly in a mortar the coarse kind, throwing it into a large jug of water, and stirring well. Immediately the large particles have sunk, pour off into a shallow plate or basin, and let the water evaporate.

4920. Razor Paste.

Levigated oxide of tin (prepared tutty powder), 1 ounce; powdered oxalic acid, $\frac{1}{4}$ ounce; powdered gum, 20 grains; make into a stiff paste with water, and evenly and thinly spread it over the strop. With very little friction this paste gives a fine edge to the razor, and its efficiency is still further increased by moistening it.

4921. Razor Paste.

Jewelers' rouge,

Black lead,

Suet,

Of each equal parts.

4922. Bleaching Sponges.

(a.) Use weak solutions—1 ounce chloride of lime and $\frac{1}{2}$ ounce tartaric acid to the gallon of water.

(b) Soak in dilute muriatic acid (1 part acid to $1\frac{1}{2}$ parts water) for 12 hours, wash well with water to remove lime, then immerse it in a solution of 2 pounds hyposulphite of soda in 12 pounds water to which 2 pounds muriatic acid has been added a moment before. After it is sufficiently bleached, remove, wash again, and dry.

(c) Beat the sponges carefully and then place them in a mixture of

Hydrochloric acid..... 1 part.

Water 20 parts.

They are then boiled in water and thoroughly washed, after which they are placed in a water bath to which a sufficient quantity of sulphuric acid has been added to bring it to 4 degrees Beaumc. This bath is compounded with bleaching liquor, until it is entirely saturated with gas. The sponges remain in this for half an hour, when they are taken out, rinsed off in soft water and passed through an acid bath. They are placed several times in succession in a bath acidulated with sulphuric acid to 4 degrees Beaumc, and to which a sufficient quantity of potassium hydrate or of sodium hydrate has been added to impregnate it with gas. The sponges remain here for some time, when they are taken out, rinsed in soft water, squeezed out and dried.

(d) Soak for several days in cold water, renewing the water and squeezing the sponges occasionally. Then wash in warm water, and put into cold water acidulated with hydrochloric acid. Next dry, take out, and wash thoroughly in soft water; then immerse in an aqueous sulphurous acid (specific gravity 1.034) for a week. Afterward wash in plenty of water, squeeze, and allow to dry in the air.

4923. Gas Tight Corks.

Paraffin is fused in a suitable vessel, the dry corks are added and immersed in the paraffin by means of a perforated cover or disc. The air is now easily expelled from the pores of the corks, which, after about five minutes, are removed and cooled; they may now be cut and bored like wax, are easily driven into the necks of the bottles and readily removed, retain their smoothness and are gas-tight throughout.

4924. Impervious Corks.

(a) Make a solution of 4 parts of gelatin in 52 parts of water, and add to it, in the dark, or a place illuminated with artificial (non-actinic) light, 1 part of bichromate of potassium or ammonium or sodium, previously likewise dissolved in water. Having first treated the corks with vapors of ether or benzol to render them thoroughly dry, dip them in the prepared solution, and then expose them several days to the sunlight, turning them carefully over so as to make the light fall upon every part of each cork. The coating of gelatin and chromic acid becomes insoluble under the influence of sunlight.

(b) Heat the corks to 100 degrees C. (212

F.) in order to kill all spores which they may contain. Then, while still hot, dip them into a solution of 1 part of albumen (egg albumen or blood albumen) in 200 parts of water, and afterward into another containing 1 part of tannic acid, $\frac{1}{2}$ part of salicylic acid and 200 parts of water. This causes a formation of tannate of albumen in the pores of the cork, and the salicylic acid at the same time acts antiseptically.

4925. Skeleton Leaves.

Soak in rain water for some weeks, remove by floating upon a card, and very gently remove upper skin with a soft camel's hair brush. Float in water, and catch on a card with the other side uppermost, and remove other skin and pulp. A stiff brush may be needed, to be used by dabbing. Do not touch with finger. Finally wash well, bleach with javelle water, wash and dry.

4926. Battery Fluid.

(a) Dissolve $1\frac{1}{2}$ ounces of bichromate of potash in twenty-four ounces of hot water and add $\frac{3}{4}$ ounces of saltpetre—let this cool, then add 3 ounces of commercial sulphuric acid, cool again and add a solution of $\frac{1}{4}$ ounce of bisulphate of mercury in 3 ounces of cold water. This gives 2 pints of fluid. Do not use until cold.

(b) Potassium bichromate.... 3 ounces.

Water $\frac{1}{2}$ gallon.

Sulphuric acid..... $6\frac{1}{2}$ ounces.

Allow to stand six hours before using.

4927. Homemade Leclanche Battery.

Procure as many two-pound jars as you want cells. Procure an equal number of porous cells of the same height, but only half the diameter. Place a lead-capped plate of carbon, with terminal, in each porous pot; fill in tight with a mixture of equal parts of crushed graphite and black oxide of manganese. Put a zinc rod (with terminals) in each outer jar; fill up to about three-fourths their capacity with a solution of 1 part sal ammoniac to 10 parts of water. Connect up in series—that is to say, the carbon of the first cell to the zinc of the next, and so on, leaving the first zinc and the last carbon free for attachment to the outer circuit.

4928. Fire Extinguishing Liquid.

Make the following solutions: 1. Ammonium chloride, 200 parts; water, 20,000 parts. 2. Alum calcined and pulverized, 350 parts; water, 10,000 parts. 3. Ammonium sulphate, in powder, 3,000 parts; water, 500 parts. 4. Sodium chloride, 2,600 parts; water, 40,000 parts. 5. Sodium carbonate, 350 parts;

water, 5,000 parts. 6. Liquid water-glass, 4,500 parts. Mix the solutions in the order named, and to the mixture add 20,000 parts of water.

4929. Confectioners' Paste Colors.

Red:

Powdered alum..... 4 ounces.

Sodium bicarbonate..... 4 ounces.

Powdered cochineal..... 4 ounces.

Potassium bitartrate..... 6 ounces.

Heat to boiling point, add 1 pound glucose, and cook to 220 degrees F., and pour into a porcelain dish to cool.

Orange: Add to the red above $\frac{1}{4}$ pound turmeric.

Yellow: Add $\frac{1}{2}$ pound turmeric to 1 pint alcohol, add 1 pound glucose, and cook to 220 degrees F., over a slow fire.

Brown: Take equal parts of red and yellow, and add lampblack, mixed with water, to the desired shade.

Green, light and dark: Can be made by adding Prussian blue to yellow paste, but is usually prepared from spinach.

For all purposes it is better for the candy-maker to purchase his colors ready made, as they cannot, on a small scale, be produced any cheaper than they can be bought of large makers. The colors should be vegetable, for it is no doubt true that mineral colors, merely from the fact of their being mineral, are harmful, though in some cases not actually poisonous. Aniline colors, though very bright, should be carefully avoided. They are all dangerous although their evil influences cannot be traced. The French government, which is careful of the health of its citizens and the reputation of its manufactured products, allows for the use of confectioners:

Indigo,

Prussian blue,

Ultramarine, for blue.

Cochineal,

Carmine,

Carmine lake, for red.

Saffron,

French berries,

Persian berries,

Turmeric,

Fustic, for yellow.

A mixture of one of the yellows and one of the blues, for green.

If the candy-maker desires to experiment in making his own red—the most frequently used color—he may put into a clean copper or porcelain saucepan one-quarter pound cochineal in powder, with 3 pints of water; allow to boil; add 2 ounces alum in powder or cracked small very gradually, and stir. Boil a minute or two; add gradually 2 ounces powdered soda; boil again

a couple of minutes and keep stirring. Finally, add one-quarter pound cream of tartar; boil two or three minutes more and strain through a fine hair sieve or coarse clean muslin. The latter is not good for a strainer, as it takes up so much of the color. Set away in a tightly-corked bottle for use. If this color touches tin or iron it will turn brown.

For yellow, saffron, French or Persian berries may be boiled or infused like tea, and boiled down until it is of the required shade.

Blue can be thus prepared: In a stone-ware jar of 3 gallons capacity, put about two pounds and a half of sulphuric acid. To this add powdered indigo gradually, stirring all the while with a glass rod until the whole forms a pasty mass. It will require about a quarter pound of indigo. The jar should stand in a pan of cold water, as the mixing develops much heat and swells very much while going on. Avoid breathing the fumes. After thorough mixture allow to stand an hour or more, to insure perfect solution of the blue. Then fill the jar with cold water, and stir around with the rod. Keep this two or three hours, then pour it out into glass jar of the same size. Now crack up some common potash and drop it in small lumps into the blue water. This potash takes up the sulphuric acid and allows the blue in fine particles to drop to the bottom. Keep adding potash as long as the blue continues to fall; when no more blue particles fall, stop adding the potash and let the mixture rest an hour or two, and then pour off the waste. The bottom will be your blue coloring which can be dried for use. Keep in an air-tight jar, it will remain good for an indefinite period. It mixes with water in any proportion. In the proportion in which it would be used to color confectionery it is harmless, no ill effect having yet been traced to it, though indigo itself is a medicine of decided character. The blue is somewhat muddy when used in candy.

Green, as already stated, may be made of the blue and yellow mixed—purple, of the red and blue mixed. Brown may be made of burnt sugar, so called, or caramel, which is sugar boiled until it assumes a dark-brown color. By mixing this with water, all shades of brown may be made. Mixing chocolate with water will also give a good brown. Black is ivory or bone charcoal, ground fine, and mixed with a little gum arabic. It is used in the candy as well as on it—that is, toy candies are sometimes painted with it, mixed with

syrup. The animal charcoal is harmless entirely either way.

The color is mixed by many on the slab of marble or iron just after the candy is poured out on the slab. For this purpose, the colors should be rubbed up with good sweet oil to about the consistency of paint or cream. Oil assimilates readily with the candy. A sufficient quantity of the color having been taken (and this must be a matter of judgment and practice), it is worked into the hot candy with the palette (large) knife and by doubling and rolling the candy.

4930. Harmless Green for Sweet-meats.

Take 5 grains saffron and shake it up in $\frac{1}{4}$ ounce of distilled water, and allow the mixture to stand for 24 hours. Also take 4 grains of indigo carmine, and with $\frac{1}{2}$ ounce of distilled water treat in the same way as the former. At the end of the 24 hours the two solutions are mixed together, producing a fine green solution, capable of coloring 5 pounds of sugar.

4931. Patent Wagon Grease From Resin Soap.

Stir

Powdered slaked lime..... 90 pounds
Resin Oil..... 100 pounds.

Heat the mixture, constantly stirring it, until a uniform paste of the consistency of syrup is obtained. This resin oil compound is a component of all the patent wagon greases.

4932. Lubricant.

	Liquid.	Solid.
Petroleum (30 degrees to 37 degrees gravity)	1 gal.	1 gal.
Crude paraffine	1 oz.	2 ozs.
Wax (myrtle, Japan and gambier).....	$1\frac{1}{2}$ ozs.	7 ozs.
Bicarbonate of soda..	1 oz.	1 oz.
Powdered graphite...		
.....	3 to 5 ozs.	8 ozs.

4933. Lubricant, Munger's.

Petroleum 1 gallon.
Tallow 4 ounces.
Palm oil..... 4 ounces.
Plumbago 6 ounces.
Soda 1 ounce.

These are mixed and heated to 180 degrees F. for an hour or more, cooled and after 24 hours, well stirred together.

4934. To Render Ivory Flexible.

Immerse in a solution of pure phosphoric acid (specific gravity 1.13) until it loses, or partially loses its opacity, when it is washed in clean, cold water, and dried. In this state it is as flexible as leather.

but gradually hardens by exposure to dry air. Immersion in hot water, however, restores its softness and pliancy. The following method may also be employed: Put the ivory to soak in 3 ounces nitric acid mixed with 15 ounces of water. In 3 or 4 days the ivory will be soft.

4935. Powdered Meat.

Raw meat, 250 parts; burnt sweet almonds, 75 parts; bitter almonds, 50 parts; sugar, 80 parts; the whole to be rubbed in a mortar to a homogeneous paste, adding sufficient water from time to time to give a proper consistency for a semi-solid or liquid mixture. In the liquid preparation the meat will settle after a while, but may be dispersed through it by shaking. The preparation may be preserved, bottled and kept in a cool place, and its nutritive value may be increased by adding to it the yolks of 1 or 2 eggs.

4936. Stuffing Birds and Animals.

(a.)

Camphor 1 ounce.
Corrosive sublimate..... ½ ounce.
Alum ½ ounce.
Sulphur 1 ounce.

All finely powdered and mixed.

(b.)

Tanners' bark, dried and powdered..... 2 ounces.
Burnt alum..... 1 ounce.
Snuff 1 ounce.

Mix, and add:

Sulphur 1 dram.

(c.) Becoeur's Arsenical Soap.

Camphor 5 drams.
Arsenic 4 ounces.
White soap..... 4 ounces.
Carbonate of potash..... 12 ounces.
Camphor ¼ ounce.
Arsenic ¼ ounce.
Air slaked lime..... 4 ounces.

Make a stiff paste with a little water.

4937. Tempering Liquid.

Water 2 gallons.
Saltpetre ½ ounce.
Pulverized borax..... ½ ounce.
Pulverized sal ammoniac.. ½ ounce.
White vitriol..... 1 ounce.
Salt 1½ pints.

4938. Tempering Liquid.

Water 2 gallons.
Saltpetre 2 ounces.
Alum 2 ounces.
Sal ammoniac (pulverized) 1 ounce.
Salt 1½ pounds.

4939. Gilding Brass and Copper.

(a.) Convert 6¼ pennyweights fine gold into chloride, dissolve in 1 quart distilled

water, add 1 pound bicarbonate of potassium and boil the mixture for 2 hours. Immerse the articles to be gilded in the warm solution for a few seconds up to 1 minute, as necessary.

(b.) Another method is to dip the articles in a solution of protonitrate of mercury, then into the gilding liquid. During the action which takes place, the film of mercury, which is electro-positive to the gold, dissolves in the auriferous solution, and a film of gold is deposited in its place.

(c.) Dissolve in aqua regia 1 grain fine gold, previously rolled very thin, in a porcelain capsule heated on the sand-bath and concentrated till it is the color of ox blood. Add 1 pint distilled water, hot, in which have been dissolved 4 grains cyanide of potassium. Stir with a glass rod and filter through unsized paper. Heat a little above lukewarmness, and the articles to be gilded are immersed in it and supported on a piece of very clean zinc.

4940. Gilding Silver.

Dissolve equal parts of corrosive sublimate and chloride of ammonium in nitric acid, add some grain gold to the mixture and evaporate to half its bulk. Apply while hot to the surface of the silver article.

4941. To Gild Polished Steel.

Dissolve pure gold in aqua regia, evaporate gently to dryness, dissolve in water, and add three times its bulk of sulphuric ether. Allow to stand 24 hours, and the ethereal solution of gold will float on top. Polished steel dipped in this is at once beautifully gilded, and by tracing patterns on the surface of the metal with any kind of varnish, beautiful devices in plain metal and gilt will be produced.

4942. To Silver Brass.

Clean the article thoroughly with dilute nitric acid, wash with water, and then with dilute ammonia, and dry in sawdust. Take 1 part chloride of silver, 3 parts pearl ash, 1 part whiting, and 1½ parts common salt; or, 1 part chloride of silver and 10 parts cream of tartar, and rub the brass with a moistened piece of cork dipped in the powder. Wash, dry in sawdust, and immediately lacquer to preserve the surface.

4943. Silver Powder for Coating Copper.

Nitrate of silver, 60 grains; common salt, 40 grains; cream of tartar, 7 drams. Ready for application when mixed and moistened with a little water.

4944. To Silver Cast-Iron.

Fifteen grains nitrate of silver are dissolved in 250 grains water, and 30 grains potassium cyanide added. When all dissolved, pour into 700 grains water in which 15 grains common salt have been dissolved. Clean the iron well, dip for a few minutes in a bath of nitric acid (1.2 specific gravity), then place in the silvering fluid.

4945. To Silver Small Metal Articles.

Dip them into a solution of common salt, then rub with a mixture of 1 part precipitated chloride of silver, 2 parts potash alum, 8 parts common salt and 8 parts cream of tartar. Wash and dry with a soft rag.

4946. Liquid Plating Wash.

Dissolve 1 ounce silver nitrate in 12 ounces soft water, and add 2 ounces potassium cyanide. Shake together and let stand until it becomes clear. Have some ½-ounce vials half full of Paris white or fine whitening, and fill them up with the liquid. This is very poisonous and should be handled with great caution.

4947. Gold Plating Solution.

In the process of electro-plating with gold the bath is usually heated, as the deposits obtained in such a bath are more homogeneous, tenacious and durable, and of a better color, besides which recommendation a greater quantity of the metal may be deposited satisfactorily from it in a given time than from a cold bath. The same bath does not answer very well for all metals; either the bath must be modified to suit the metal, or the latter must be previously coated with another metal to suit the conditions. Gold deposits are obtained with the greatest facility upon silver or copper, their rich alloys, or other metals coated with them. With these a hot bath (at about 170 degrees F.) and a moderately strong current give good results.

(a.)

Distilled water.....	1 gallon.
Phosphate of soda, crystals.....	9½ ounces.
Bisulphite of soda.....	13-5 ounces.
Cyanide of potassium, pure.....	1-6 grain.
Gold chloride.....	160 grains.

Dissolve in a portion of the water, heated, the phosphate of soda. Dissolve in another portion of the water the bisulphite of soda and cyanide of potassium. Dissolve the gold chloride in the remaining water, stir the solution slowly into the cold phosphate of soda solution, and finally add the solution of cyanide and bisulphite. The bath, now ready for use, should be colorless.

(b.)

Distilled water.....	1 gallon.
Ferrocyanide potassium...	5¼ ounces.
Carbonate potassium, pure	1¼ ounces.
Sal ammoniac.....	¾ ounce.
Gold chloride.....	¾ ounce.

Dissolve all together, except the gold chloride, in the hot water; filter, cool and gradually stir in the gold chloride dissolved in a little water. Boil for half an hour, replace the evaporated water, and the bath is ready for use.

(c.)

Distilled water.....	1 gallon.
Cyanide of potassium....	24-5 ounces.
Gold chloride.....	1 ounce.

Dissolve the gold chloride in the water, then add the cyanide, and stir until solution is complete.

(d.)

The following bath is designed to be used in the cold:

Water, distilled.....	1 gallon.
Potassium cyanide, pure.....	31-5 ounces.
Gold chloride.....	31-10 ounces.

Dissolve the cyanide in a part of the water, then gradually add the gold chloride dissolved in the remainder. Boil for half an hour before using. (Use cold.)

4948. Nickel Plating Solution.

(a.)

Double sulphate of nickel and ammonium.....	5 to 8 parts.
Water.....	100 parts.

Dissolve the nickel double salt in the water, with the aid of heat. Cautiously add ammonia, or the sulphate of ammonium, until the solution is neutral to test paper. This solution should be maintained as nearly neutral as possible in use.

(b.)

Acetate of nickel.....	2¾ parts.
Acetate of calcium.....	2½ parts.
Water.....	100 parts.

To each gallon of this solution add 1 fluid ounce acetic acid, 1.047 specific gravity.

To prepare this bath, dissolve about the same quantity of dry carbonate of nickel as that called for in the formula (or three-quarters of that quantity of the hydrated oxide) in acetic acid, adding the acid cautiously, and heating until effervescence has ceased and solution is complete. The acetate of calcium may be made by dissolving the same weight of carbonate of calcium (marble dust) as that called for in the formula (or one-half that quantity of caustic lime), and treating it in the same manner. Mix the two solutions, dilute to the required amount by the addition of water, and then to each gallon of the solution add

a fluid ounce of free acetic acid, as prescribed. (Potts' solution.)

(c.)

Sulphate of nickel and ammonium..... 10 parts.
Sulphate of ammonium..... 4 parts.
Citric acid..... 1 part.
Water..... 200 parts.

The solution is made with the aid of heat, and, when cool, small fragments of carbonate of ammonium should be added until the bath is neutral to test paper.

4949. Silver Plating Solution.

For silver plating, the bath consists of potassium silver cyanide, prepared by precipitating solution of silver nitrate with potassium cyanide and dissolving the washed precipitate in excess of potassium cyanide solution.

Potassium cyanide..... 12 ounces.
Water..... 1 gallon.

4950. Fertilizing Mixture for Lawns.

Nitrate of sodium..... 80 parts.
Superphosphate of calcium. 100 parts.
Guano..... 200 parts.
Gypsum..... 120 parts.

4951. To Make Roses Bloom.

Scrape from the chimney or stovepipe where wood is used for fuel, a quantity of soot. Put into a vessel and pour boiling water over it. Let it stand for a few days, and then use the liquid to water the earth around the plants. The application should be made every two or three days.

4952. Plant Food.

Sulphate of ammonium..... 1 ounce.
Nitrate of potassium..... ½ ounce.
Sugar ¼ ounce.

Use a teaspoonful to a gallon of water; to be applied to the plants once or twice a week.

4953. Curry Powder.

(a) Cayenne pepper 1 to 4 drams.
Ginger 4 drams.
Mace 4 drams.
Cloves 4 drams.
Mustard 1½ ounces.
Turmeric 2 ounces.
White pepper..... 3 ounces.
Fenugreek 4 drams.

Reduce all to a fine powder and mix thoroughly, passing through a sieve..

(b) Coriander seeds, in fine powder 1 ounce.
Cayenne, in fine powder... 1 ounce.
Cumin seeds, in fine powder 2 ounces.
Mustard, in fine powder.. 3 ounces.

Jamalca ginger, powdered, 3 ounces.
White pepper, in fine powder 6 ounces.
Turmeric, in fine powder.. 16 ounces.

(c) Black pepper ½ ounce.
Allspice ½ ounce.
Mustard (scorched) 1 ounce.
Ginger 1 ounce.
Fenugreek seed..... 2 ounces.
Cinnamon bark..... 2 ounces.
Turmeric 4 ounces.
Coriander seeds..... 4 ounces.

Reduce all to a fine powder and mix thoroughly, passing through a sieve.

(d) Cayenne pepper, in powder 10 drams.
Ginger, in powder..... 4 ounces.
Pimento, in powder..... 4 ounces.
Dill fruits, in powder... 4 ounces.
Mustard seed, in powder. 8 ounces.
Cumin seed, in powder.. 8 ounces.
Black pepper, in powder. 8 ounces.
Fenugreek, in powder... 12 ounces.
Turmeric, in powder..... 1½ pounds.
Coriander, in powder.... 5 pounds.
Table salt 1½ ounces.

(e) Mace 1 dram.
Allspice 1½ ounces.
Cumin ½ pound.
Turmeric ½ pound.
Coriander seed..... 1 pound.
Black pepper 1 pound.

(f) Coriander 8 parts.
Curcuma 6 parts.
Black pepper 4 parts.
Ginger 2 parts.
Fenugreek 2 parts.
Cayenne pepper ½ part.
Cumin seed ½ part.

4954. Singapore Curry Powder.

One cocoanut and 1 lime sliced.

Cardamoms, thoroughly ground 2 ounces
Cinnamon 2 ounces.
Chillies 1 ounce.
Coriander seed 4 ounces.
Black pepper 4 ounces.
Mustard seed 2 ounces.
Turmeric 5 ounces.
Ginger 4 ounces.

4955. Mushroom Catsup.

Mushroom juice 2 gallons.
Pimento 2 ounces.
Cloves 1 ounce.
Black pepper 1 ounce.
Mustard seed 1 ounce.
Ginger 1 ounce.
Salt 1 pound.
Shallots 2 ounces.
Bruise all the spices; gently simmer

them for one hour with the juice in a covered vessel, and when cold, strain, and bottle the liquor.

4956. Tomato Sauce.

Ripe tomatoes	3 dozens.
Chili vinegar	1 pint.
Garlic	1 ounce.
Shallots	1 ounce.
Common salt	2 ounces.
Cayenne pepper	½ dram.
Lemon juice	5 ounces.

4957. Tomato Sauce.

Digest 1 gallon of bruised tomatoes with ½ pound salt for 3 days. Press out the juice and add to each quart 2 ounces of bruised shallots and 1 dram of black pepper. Let the whole simmer for half an hour, strain, and add ¼ ounce each of mace, pimento, ginger, nutmegs and cochineal. Warm again and simmer for 10 minutes; strain, and bottle a few days later.

4958. Tomato Catsup.

Ripe tomatoes, not peeled	½ bushel.
Vinegar	1 quart.
Salt	1 pound.
Black pepper	¼ pound.
Red peppers.....	12 pods.
Allspice	¼ pound.
Cloves	1 ounce.
Good mustard	3 boxes.
Garlic, sufficient.	
Onions	6
Brown sugar	2 pounds.
Peach leaves	1 handful.

Boil until of the right consistency, being careful not to let it burn; then strain through a wire sieve when cool enough. The ingredients are all put in together and thoroughly cooked. When done it will be quite thick.

4959. Epicurean Sauce.

Anchovies	16 ounces.
Shallots (peeled and sliced)	4 ounces.
Horseradish (sliced)	2 ounces.
Pimento (bruised)	2 ounces.
Black pepper (bruised) ..	2 ounces.
Curry powder	1 ounce.
Cayenne pepper	1 ounce.
Garlic (peeled and sliced) ..	6 drams.
Celery seed (bruised)....	½ ounce.
Essence of lemon.....	1½ drams.
Brown vinegar	8 ounces.
Indian soy	16 ounces.
Port wine	3 pints.
Walnut ketchup	3 pints.
Mushroom ketchup	5 pints.

Gently boil all the ingredients, except the vinegar, for an hour; strain, add the vinegar and bottle.

4960. Walnut Catsup.

Juice of young English walnuts	1 gallon.
Anchovies	2 pounds.
Shallots	1 pound.
Cloves, powdered	1 ounce.
Mace	1 ounce.
Garlic	1 clove.

Boil the juice for about ten minutes, and skim it; then add the anchovies, shallots, spices, and the garlic, sliced. Simmer the whole in a covered vessel for about fifteen minutes, strain it, and, when cold, pour it into bottles, adding to each bottle a little fresh spice and salt according to taste.

4961. Brighton Sauce.

Garlic	4 ounces.
Cayenne pepper.....	1½ ounces.
Mustard	3 ounces.
Common salt	3 ounces.
Indian soy	24 ounces.
Mushroom ketchup.....	24 ounces.
Acetic acid	1½ pints.
Water	10½ pints.

Slice the garlic, and bruise it with the salt; add to the other ingredients, digest in a warm place for a week. Strain, and bottle for use.

4962. Chutnee Sauce.

Gooseberries	2 quarts.
Vinegar	2 quarts.
Salt	1 pound.
Mustard seeds	1 pound.
Stoned raisins	1 pound.
Brown sugar	1 pound.
Garlic	12 ounce.
Cayenne pepper	6 ounces.

Make a syrup of the sugar with a pint of vinegar, boil the gooseberries with a quart of the vinegar; bruise the mustard seed and the garlic, and well incorporate the whole of the ingredients in a mortar.

4963. Sauce l'Empereur.

Cloves	1 dram.
Mace	1 dram.
Pimento	1 dram.
Anchovies	16 ounces.
Walnut juice.....	16 ounces.

Boil, and add:

Shallots	2
Indian soy.....	5 ounces.
Port wine.....	10 ounces.
Vinegar	1 pint.

Boil and simmer for 20 minutes, and strain.

4964. Sauce Superlative.

Port wine and mushroom ketchup, of each 1 quart; walnut pickle, 1 pint; pounded anchovies, ½ pound; lemon peel, minced shallots and scraped horseradish, of each 2 ounces; allspice and black pepper, bruised,

of each 1 ounce; cayenne pepper and bruised celery seed, of each $\frac{1}{4}$ ounce (or currie powder, $\frac{3}{4}$ ounce); digest 14 days, strain and bottle.

4965. Herefordshire Sauce.

Cayenne pepper..... 1 ounce.
 Shallots (sliced)..... 2 ounces.
 Walnut pickle..... 1 pint.
 Indian soy..... $1\frac{1}{2}$ pints.
 Mushroom ketchup..... 4 pints.
 Vinegar 1 gallon.
 Macerate for a month, and strain.

4966. Sauce Piquant.

Horseradish 1 ounce.
 Salt 4 ounces.
 Mustard 2 drams.
 Shallots $\frac{1}{2}$ ounce.
 Celery seed..... $\frac{1}{2}$ dram.
 Cayenne $\frac{1}{2}$ dram.
 Tarragon vinegar..... 1 pint.

Bruise the solids, and macerate in the vinegar 14 days; then strain.

4967. Sauce Superlative.

Claret 20 ounces.
 Mushroom ketchup..... 20 ounces.
 Pickled walnut..... 10 ounces.
 Anchovies 4 ounces.
 Fresh lemon peel..... 1 ounce.
 Eschalots 1 ounce.
 Horseradish 2 ounces.
 Allspice 4 drams.
 Black pepper..... 4 drams.
 Cayenne 3 drams.
 Celery seed..... 1 dram.
 Soy..... 5 ounces.

Macerate for 14 days, and strain.

4968. Worcestershire Sauce.

Best vinegar..... 2 pints.
 Sherry 1 pint.
 Powdered allspice..... 2 drams.
 Powdered cloves..... 1 dram.
 Powdered black pepper..... 1 dram.
 Powdered ginger..... 1 dram.
 Powdered capsicum..... 1 dram.
 Powdered mustard..... 2 ounces.
 Salt 2 ounces.
 Shallots, bruised..... 2 ounces.
 Moist sugar..... 8 ounces.
 Tamarinds 4 ounces.
 Curry powder..... 1 ounce.

Do not use stock powdered spices, but crush them in a mortar immediately before use. Let all the ingredlents simmer for 1 hour in the vinegar, adding more vinegar to keep to the original volume; then add the sherry, and, if desired, a little burnt sugar to color, and let stand for a week in a closed vessel; then strain and bottle off.

4969. Royal Relish.

Garlic (peeled and sliced). $3\frac{1}{2}$ drams.
 Tincture of capsicum..... 2 drams.
 Indian soy..... 16 ounces.
 Tomato sauce..... 32 ounces.
 Walnut ketchup..... 32 ounces.
 Pickling vinegar..... 13 ounces.
 Macerate for a month, and strain.

4970. Salad Dressing.

Malt vinegar..... 6 ounces.
 Salad oil..... 4 ounces.
 Mustard $\frac{1}{2}$ ounce.
 Salt $\frac{1}{4}$ ounce.
 Isinglass 1 dram.
 Tincture of capsicum..... $\frac{1}{2}$ dram.
 Yolks of 2 eggs.

Soak the isinglass in half the vinegar, emulsify the oil with the egg yolks and the remainder of the vinegar; add the isinglass solution and the remainder of the ingredients.

4971. Kitchen Pepper.

Powdered black pepper..... 1 pound.
 Powdered mace..... 1 ounce.
 Powdered nutmeg..... 1 ounce.
 Cayenne pepper..... $\frac{1}{2}$ ounce.

4972. Savoury Ragout Powder.

Salt 1 ounce.
 Mustard $\frac{1}{2}$ ounce.
 Black pepper..... $\frac{1}{2}$ ounce.
 Lemon peel (grated)..... $\frac{1}{2}$ ounce.
 Pimento 2 drams.
 Ginger 2 drams.
 Nutmeg 2 drams.
 Cayenne 2 drams.

4973. Ordinary Mustard.

Stir gradually 1 pint of good white wine into 8 ounces of ground mustard seed, add a pinch of pulverized cloves, and let the whole boil over a moderate coal fire. Then add a small lump of white sugar, and let the mixture boil up once more.

4974. French Mustard.

Fresh parsley..... 2 ounces.
 Fresh chervil..... 2 ounces.
 Fresh chives..... 2 ounces.
 Fresh tarragon..... 1 ounce.
 Fresh garlic..... 1 ounce.
 Fresh thyme..... 1 ounce.
 Powdered cloves..... 4 drams.
 Salt 8 ounces.
 Olive oil..... 4 ounces.
 Distilled vinegar..... 8 pints.

Cut the herbs and macerate 14 days in the vinegar; press the liquor out and add mustard flour q. s., and the other ingredients, adding water to make 12 quarts of prepared mustard.

4975. Mixed Spice.

Powdered coriander..... 16 ounces.
 Powdered pimento..... 4 ounces.
 Powdered caraway..... 4 ounces.
 Powdered cinnamon..... 2 ounces.
 Powdered mace..... 2 ounces.
 Powdered cloves..... 2 ounces.
 Powdered nutmeg..... 2 ounces.
 Powdered turmeric..... 1 ounce.

4976. Champagne Cider.

Good pale cider..... 100 gallons.
 Alcohol 3 gallons.
 Sugar (or honey)..... 24 pounds.

Mix them. In the case of the sugar, dissolve this in a part of the cider, and add this to the remainder. Let the mixture stand during 2 weeks in a moderately cool place, but watch it carefully, as it should not ferment before it is bottled. Finally, take out a few gallons, mix them intimately with a few gallons of skimmed milk, and incorporate the mixture thoroughly with the contents of the cask, which will thereby be clarified. Lastly, bottle the clear liquid, and secure the corks. Keep the bottles in a moderately cool place, on their sides, or standing upside down.

4977. Cider Vinegar.

Take 10 gallons new cider and allow it to ferment fully, which will probably be in about 2 weeks, if the weather be warm; then add about 8 gallons of new cider for producing a second fermentation, and in about 2 weeks add a like quantity to produce a third fermentation. Stop the bung-hole of the barrel with an empty bottle with the neck downward, and expose to the sun. When the vinegar is come, set in a cool place. When making, let there be a moderate degree of heat and free access of external air. The process is hastened by adding to the cider a quantity of mother of vinegar, as it is called, a whitish, ropy coagulum, of a mucilaginous appearance, which is formed in vinegar and acts as a ferment. The strength of vinegar depends on the amount of sugar or starchy matter to be ultimately converted into acetic acid. Cider made from late apples is esteemed the best for vinegar.

4978. Molasses Vinegar.

Raisins 25 pounds.
 Molasses 20 pounds.
 Acetic acid..... 1 pound.

Pour on the mixture 12½ gallons of boiling water, and filter the whole after the acetic fermentation has ceased. If necessary, the vinegar may be run through animal charcoal.

4979. Raspberry Vinegar.

Crush perfectly ripe raspberries to a paste, let it stand 24 to 36 hours. Then pour 1 pound of this paste into a jar, pour 1½ to 2 gallons of vinegar over it, place it in a warm place, but not in the sun. Shake frequently. After standing for several days strain through a cloth, add 1 gill of alcohol, mix thoroughly and filter the vinegar. The bottles should be entirely filled and kept in a cool place.

4980. Strawberry Vinegar.

Mash thoroughly ripe strawberries, let the paste stand in a warm place for 24 hours, then press out the juice and let it stand for a few days to ferment and to allow the slimy constituents to separate. Then filter the juice and put in well-closed glass bottles, which should be scrupulously clean, and put where it will keep for a long time. When it is to be used for flavoring, add sufficient quantity of it to good vinegar.

4981. Vanilla Vinegar.

Triturate in a porcelain mortar 4 parts of vanilla bean cut up with some white sugar, add 2 parts each of pulverized cloves and cinnamon, put all in a flask and digest with 30 parts of strong alcohol for several days. Then add 250 to 270 parts of good vinegar, let it stand for some time, shaking it frequently, then strain through a cloth, and finally filter. This vinegar is usually colored red.

4982. Spiced Pickling Vinegar.

Black pepper..... 2 ounces.
 Ginger 2 ounces.
 Pimento ½ ounce.
 Salt 1 ounce.

Bruise, and set in a warm place in a tightly-covered jar, with 1 quart of vinegar. for 3 days, occasionally shaking. For a hotter vinegar, ½ dram of cayenne may be added, and for walnuts, 1 ounce of shallots.

4983. Vinegar for Gherkins.

Good malt vinegar..... 1 gallon.
 Black peppercorns..... 6 ounces.
 Sliced ginger..... 4 ounces.
 Chillies 1 ounce.
 Garlic, in slices..... 1 ounce.

Boil the spices and garlic gently in half the vinegar for half an hour, strain through a sieve, and add the rest of the vinegar to the spices and again strain. To the remnant spices add 2 ounces of salt and 1 pint of water, and boil for half an hour. After removing from the fire add 1 pint of vinegar, and again strain into the spiced vinegar, which, when perfectly cold, may be poured over the gherkins.

4984. Vinegar for Walnuts.

Good malt vinegar.....	2 gallons.
Black peppercorns.....	½ pound.
Ginger, unbleached.....	6 ounces.
Mustard seed.....	1 pound.
Cloves	2 ounces.
Mace	2 ounces.
Garlic, in slices.....	2 ounces.

In 1 gallon of vinegar boil the whole of the spices, and, having strained, pour the hot liquor over the walnuts, then boil the remaining gallon of vinegar and pour over spices, etc. To be used hot.

4985. Vinegar for French Beans.

Distilled or very pale malt vinegar.....	1 gallon.
White peppercorns.....	4 ounces.
Bleached ginger, sliced.....	2 ounces.
Chillies	1 ounce.

Into ½ gallon of the vinegar place the whole of the spices and allow to macerate for 12 hours, then simmer (do not boil) gently for 1 hour in an enameled pan, covering the top. Use hot.

4986. Elder Wine.

Alcohol, 90 per cent.....	12½ gallons.
Water.....	12½ gallons.
Elderberries (juice of)...	6¼ gallons.
Loaf sugar.....	18¾ pounds.
Port wine.....	2¼ gallons.
Orange flower water.....	⅝ pint.

Allow it to stand 1 week; draw off.

4987. Unfermented Orange Wine.

Citric acid.....	1 ounce.
Carbonate of potash.....	1 dram.
Sugar of honey.....	to taste.
Infusion of orange peel.	4 ounces.
	(more or less.)

Alcohol.....	5 or 6 per cent.
Essence of cloves.....	5 drops.
Water to.....	1 quart.

Filter and clarify, and allow to stand at least 1 month before using, by which time all the ingredients will be thoroughly incorporated and blended.

4988. Elder Wine.

Take 5 pounds of ripe berries, free from stalks, bruise them, pour over them 1 gallon of soft or distilled water, and macerate for 2 days, with frequent stirring. Draw off the liquid and press out the juice from the magma in hair bags. Add to the liquid 4 pounds of sugar and 1¼ ounces of cream of tartar, the latter dissolved in water. Keep in a rather warm place, stir

well and set aside to ferment for 3 or 4 days, skimming and well stirring up occasionally. Then fill into casks, leaving the bung hole open. After a week, turn into other casks, and add ½ ounce brandy to the pint of wine, quite fill the casks and bung down. In 3 or 4 weeks the wine ought to be clear, but if it is not, finings must be added.

4989.**Koumyss.**

(a.)

Fresh milk.....	12 ounces.
Water.....	4 ounces.
Brown sugar.....	2½ drams.
Compressed yeast.....	24 grains.
Milk sugar.....	3 drams.

Dissolve the milk sugar in the water, add to the milk, rub the yeast and brown sugar down in a mortar with a little of the mixture, then strain into the other portion. Strong bottles are very essential, champagne bottles being frequently used, and the corks should fit very tightly; in fact, it is almost necessary to use a bottling machine for the purpose, and once the cork is properly fixed, it should be wired down. Many failures have resulted because the corks did not fit properly, the result being that the carbonic acid gas escaped as formed, and left a worthless preparation. It is further necessary to keep the preparation at a moderate temperature, and to ensure the article being properly finished, the bottles are to be gently shaken each day for about 10 minutes to prevent the clotting of casein. It is well to take the precaution of rolling a cloth around the bottle during the shaking process, as the amount of gas generated is great, and should the bottle be of thin glass or contain a flaw it may give way. Some few days elapse before the fermentation passes into the acid stage, and when this has taken place the preparation is much thicker. It is now in the proper condition to be used.

(b.)

Fill a quart champagne bottle up to the neck with pure milk; add 2 tablespoonfuls of white sugar, after dissolving the same in a little water over a hot fire; add also a quarter of a two-cent cake of compressed yeast. Then tie the cork in the bottle securely, and shake the mixture well; place it in a room of the temperature of 50 to 95 degrees for 6 hours, and finally in the ice box over night. Be sure the milk is pure; that the bottle is sound; that the yeast is fresh; to open the mixture in the morning with great care, on account of its effervescent properties; not to drink it at all if there is any curd or thickening part

resembling cheese, as this indicates that the fermentation has been prolonged beyond the proper time.

(c.)

Dilute the milk with 1-6 part of hot water, and, while still tepid, add 1-8 of very sour (but otherwise good) buttermilk. Put it into a wide jug, cover with a clean cloth, and let it stand in a warm place (about 75 degrees F.) for 24 hours; stir up well, and leave for another 24 hours. Then beat thoroughly together, and pour from jug to jug until perfectly smooth and creamy. It is now still koumyss, and may be drank at once. To make it sparkling, which is generally preferred, put it into champagne or soda water bottles; do not quite fill them, well secure the corks, and lay down in a cool cellar. It will then keep from 6 to 8 weeks, though it becomes increasingly acid. To mature some for drinking quickly, it is well to keep a bottle or two to start with in some warmer place, and from time to time shake vigorously. With this treatment it should, in about three days, become sufficiently effervescent to spurt freely through a champagne tap, which must be used for drawing it off as required. Later on, when very frothy and acid, it is more pleasant to drink if a little sweetened water (or milk and water) is first put into the glass. Shake the bottle, and hold it inverted well into the tumbler before turning the tap. Having made one lot of koumyss, it, instead of buttermilk, can be used as a ferment for the second lot, and so on five or six times in succession; after which it will be found advisable to begin again as at first.

4990. Lime Juice and Glycerine.

Nut oil.....	4 pints.
Lime water.....	3 pints.
Solution saccharate lime....	4 ounces.
Oil lemon.....	½ ounce.
Oil bergamot.....	1 dram.
Oil neroli.....	6 drops.
Oil cinnamon.....	6 drops.

Add the solution of saccharate of lime to the lime water, then add the oil and shake vigorously in a bottle capable of holding twice the quantity. Let stand a few days, and if any oil float on the surface add more of the saccharate of lime. Finally, add the oils and let stand a week.

4991. Lime Juice and Glycerine.

Oil of almond (sweet).....	2 ounces.
Oil of lemon.....	2 drams.
Carbonate of potassium....	2 drams.
Glycerine.....	1 ounce.
Lime water.....	8 ounces.

Mix them.

4992. Lemon Juice Cordial.

Glucose.....	36 pounds.
Cane sugar.....	108 pounds.
Water.....	28 gallons.
Lime juice.....	17 gallons.
Oil of orange.....	4 drams.
Oil of nutmeg.....	4 drams.
Salicylic acid.....	2 ounces.

Dissolve the glucose and cane sugar in the water, add to the solution the lime juice, the essential oils and the salicylic acid, mix well, and strain.

4993. Almond Meal.

Almonds	100 parts.
Borax	5 parts.
Glycerine	4 parts.
Oil of neroli.....	sufficient.
Oil of almonds.....	sufficient.
Essence of musk.....	sufficient.

Rub down the almonds, sift and add the other ingredients.

4994. Almond Meal.

Blanched sweet almonds, ripe and dry beans, of each 18 ounces; white castile soap, 6 ounces; spermaceti, 1½ ounces; dried carbonate of sodium, 1 ounce; oils of bergamot, lavender and lemon, of each 6 drams. Beat or grind to a fine powder, and keep from the air. To be used with a little water, in a little soap, to clean, whiten or soften the skin.

4995. Stove Blacking.

Plumbago, 2 pounds; water, 8 ounces; turpentine, 8 ounces; sugar, 2 ounces. Knead thoroughly and keep in tin boxes. Apply with a brush.

4996. Stove Blacking.

Turpentine and black varnish, put with any good stove polish, is the blacking used by hardware dealers for polishing heating stoves. If properly put on, it will last throughout the season.

4997. Liquid Stove Polish.

Bone black, 2½ parts; pulverized graphite, 2½ parts; copperas, 5 parts; water, q. s. to form a creamy paste.

4998. Liquid Black Lead Polish.

Pulverized black lead, 1½ pounds; turpentine, 1½ gills; water, 1½ gills; sugar, 1½ ounces.

4999. Bone Black Polish (for Stoves).

Mix 2 parts copperas, 1 part powdered bone black, and 1 part black lead with enough water to give proper consistency, like thick cream. Two applications are to be recommended.

5000. Paste Stove Polish.

Pulverized black lead, 2 pounds; spirits of turpentine, 2 gallons; water, 2 ounces; sugar, 2 ounces. Mix.

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